



FIG. 3

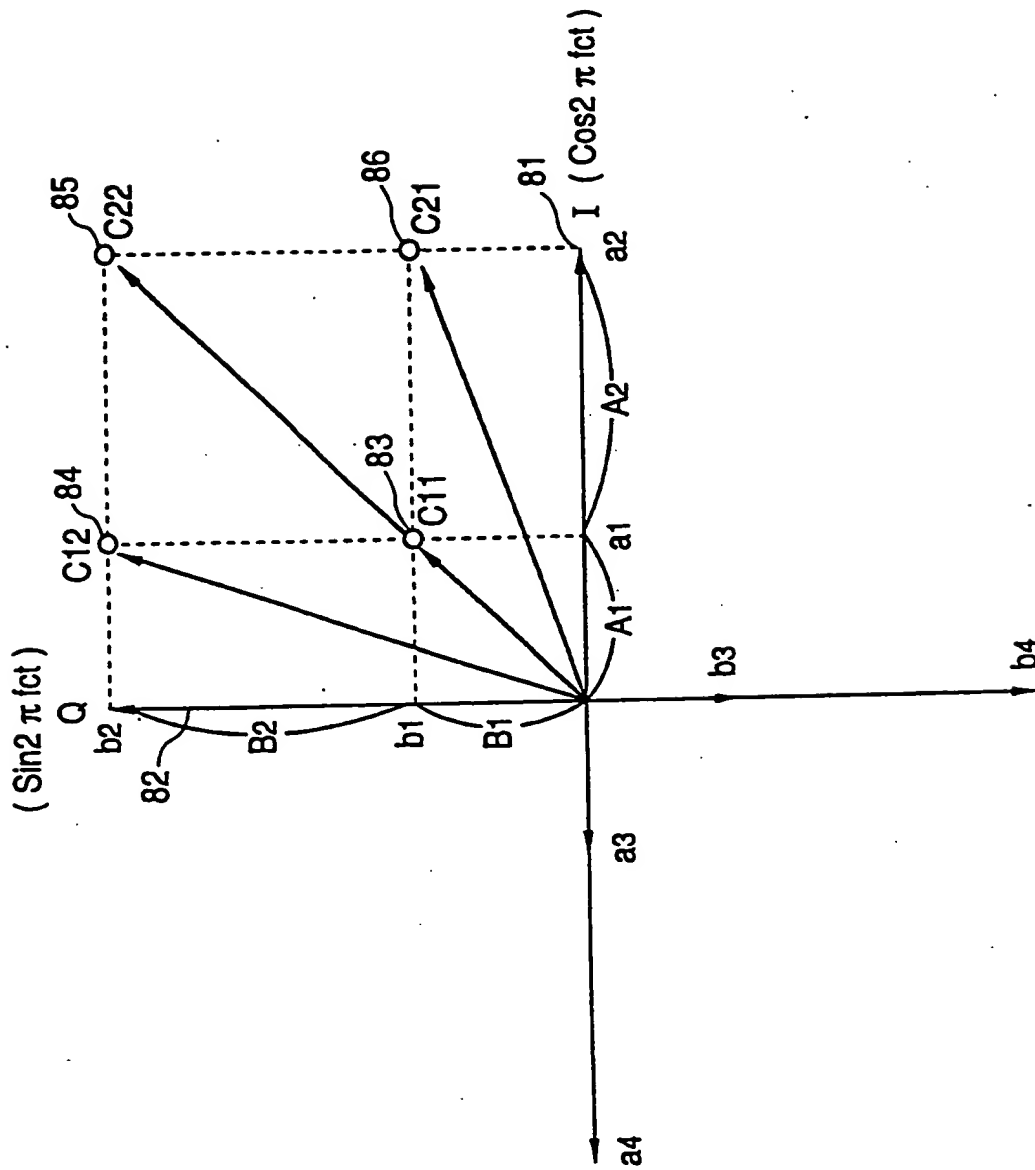


FIG. 4

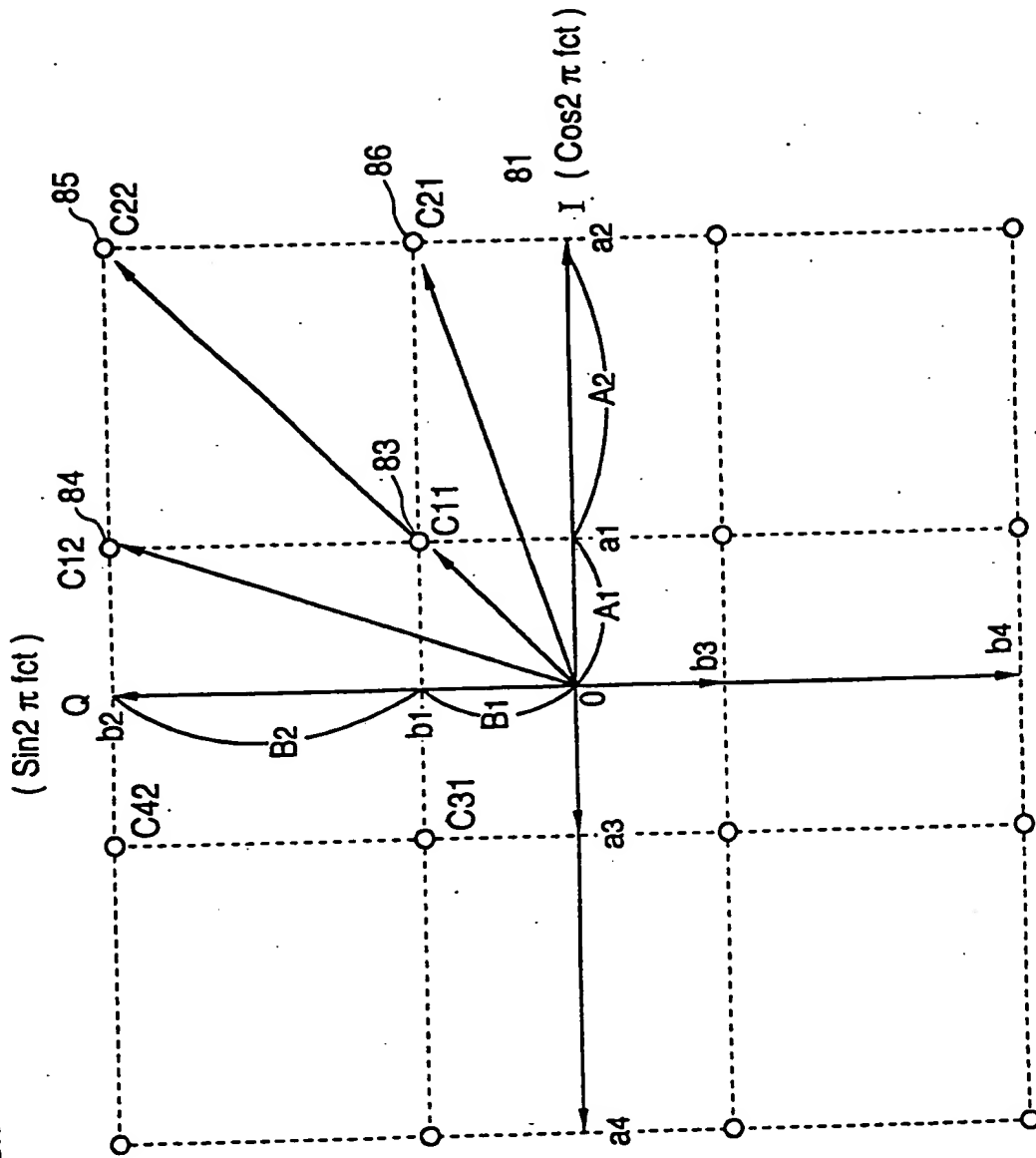




FIG. 5

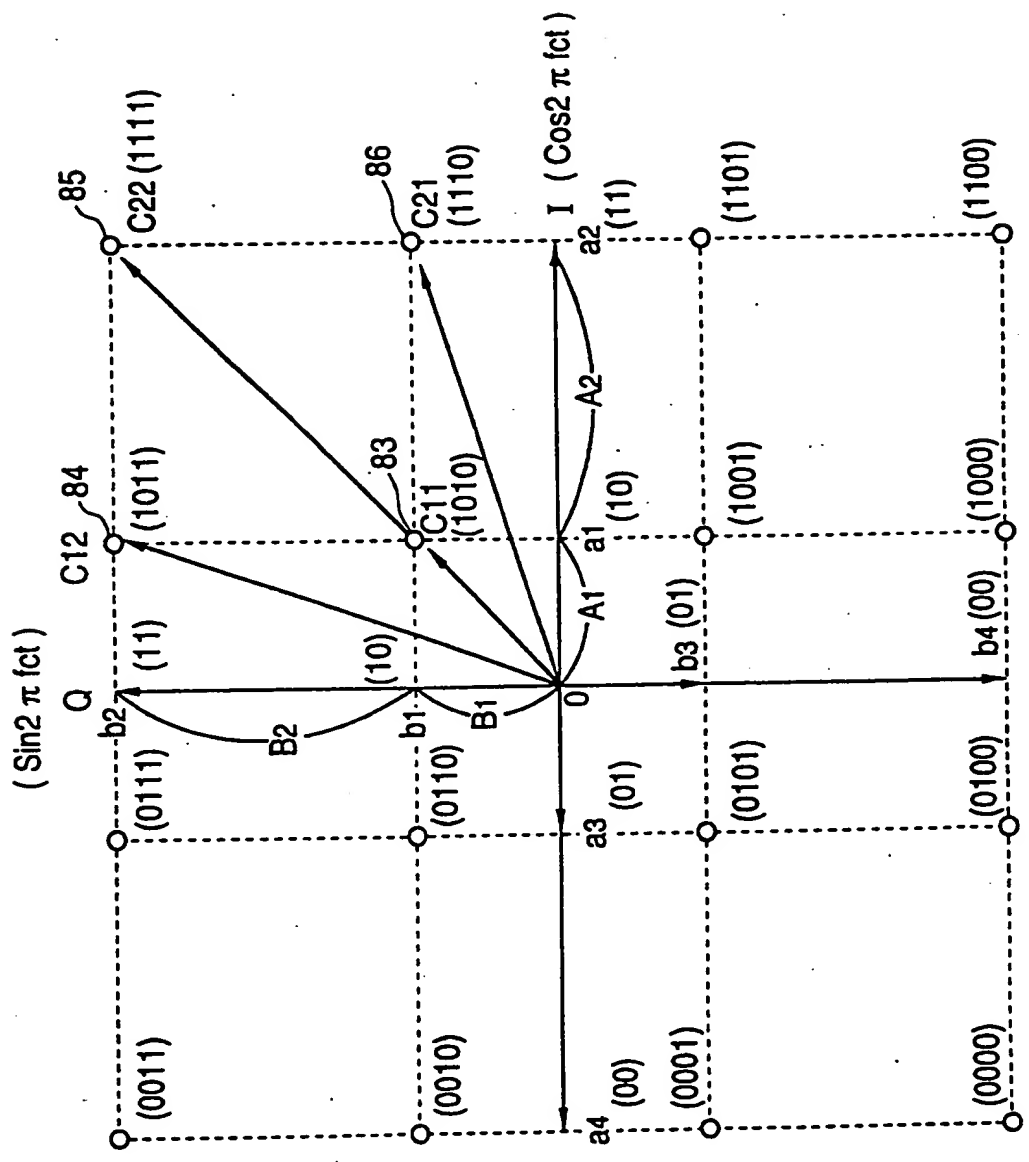




FIG. 6

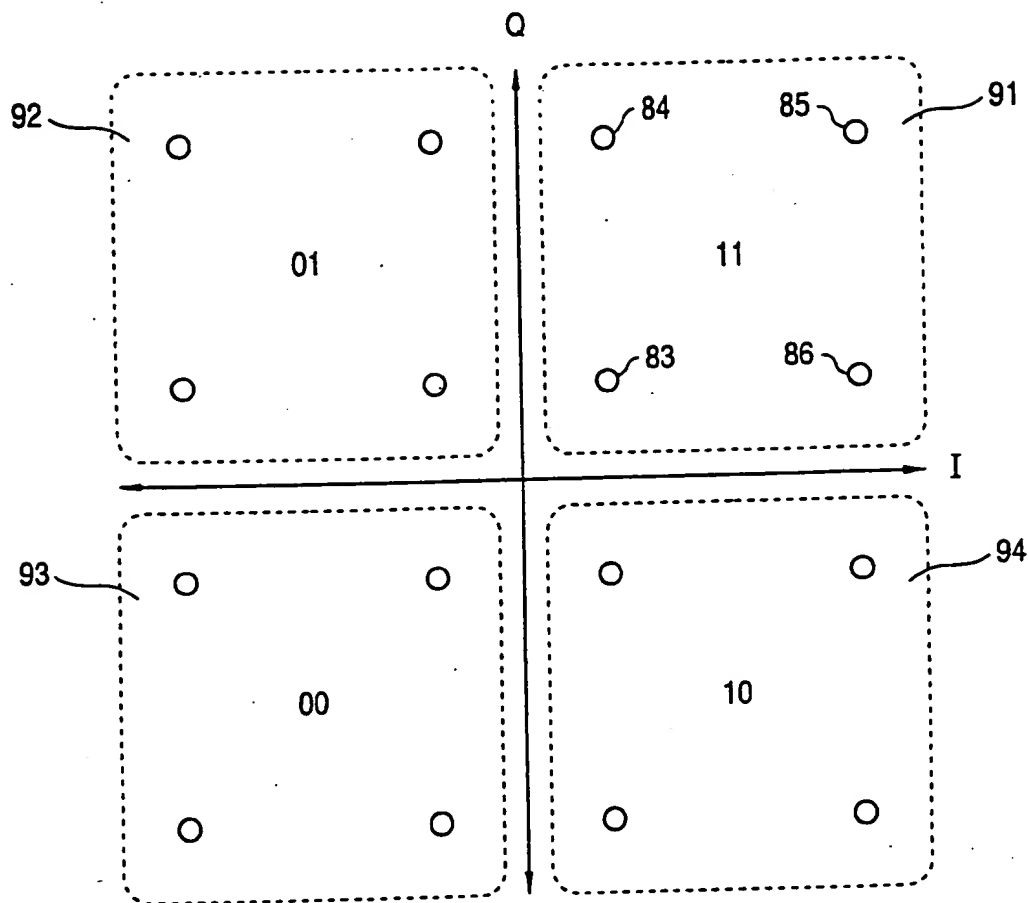




FIG. 7

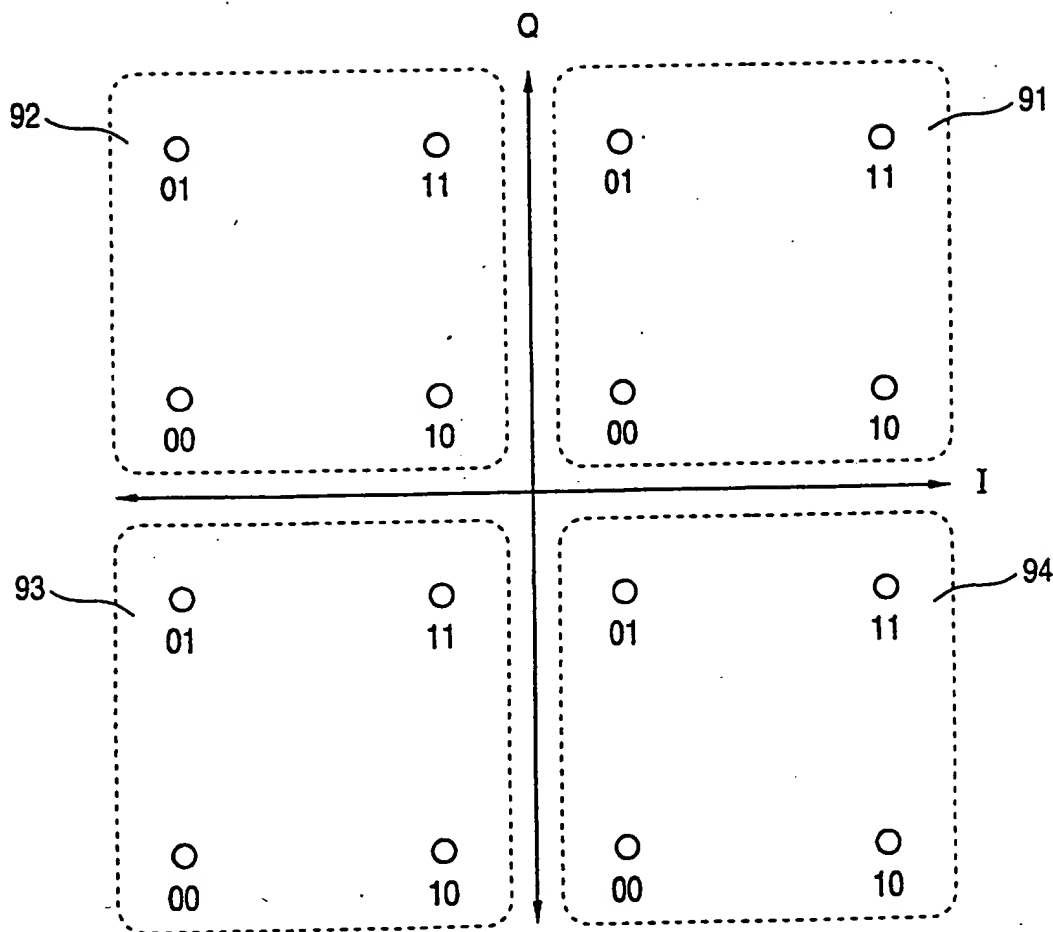




FIG. 8

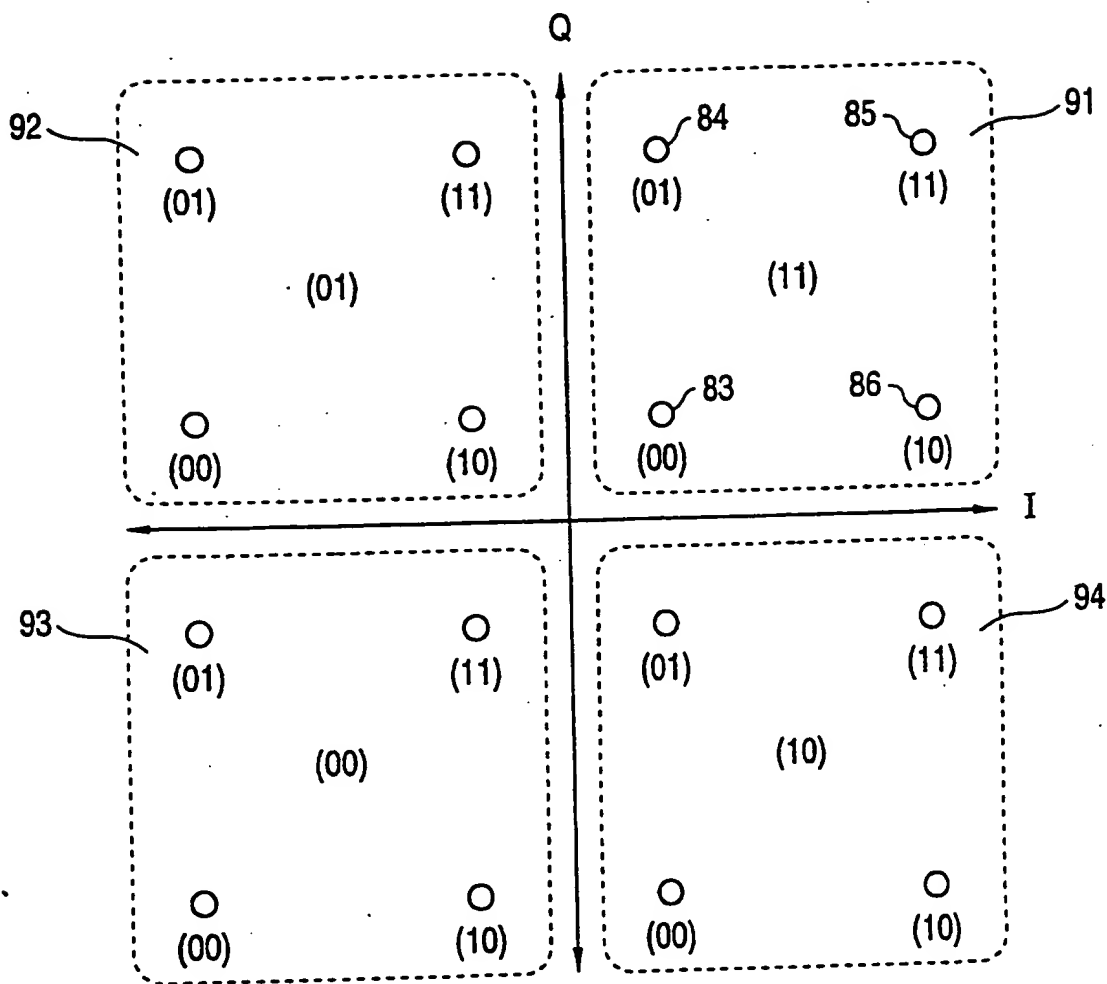




FIG. 9

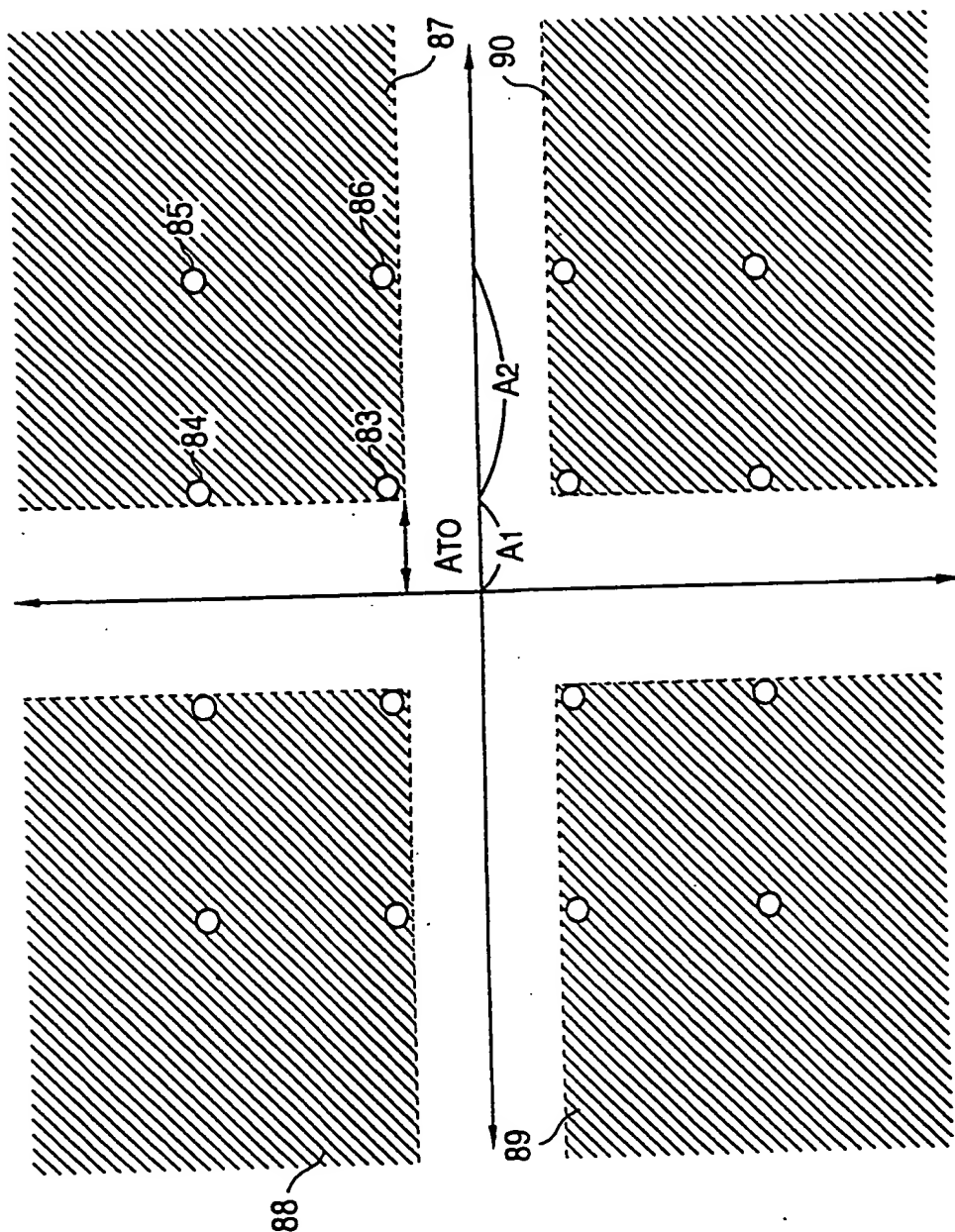




FIG. 10

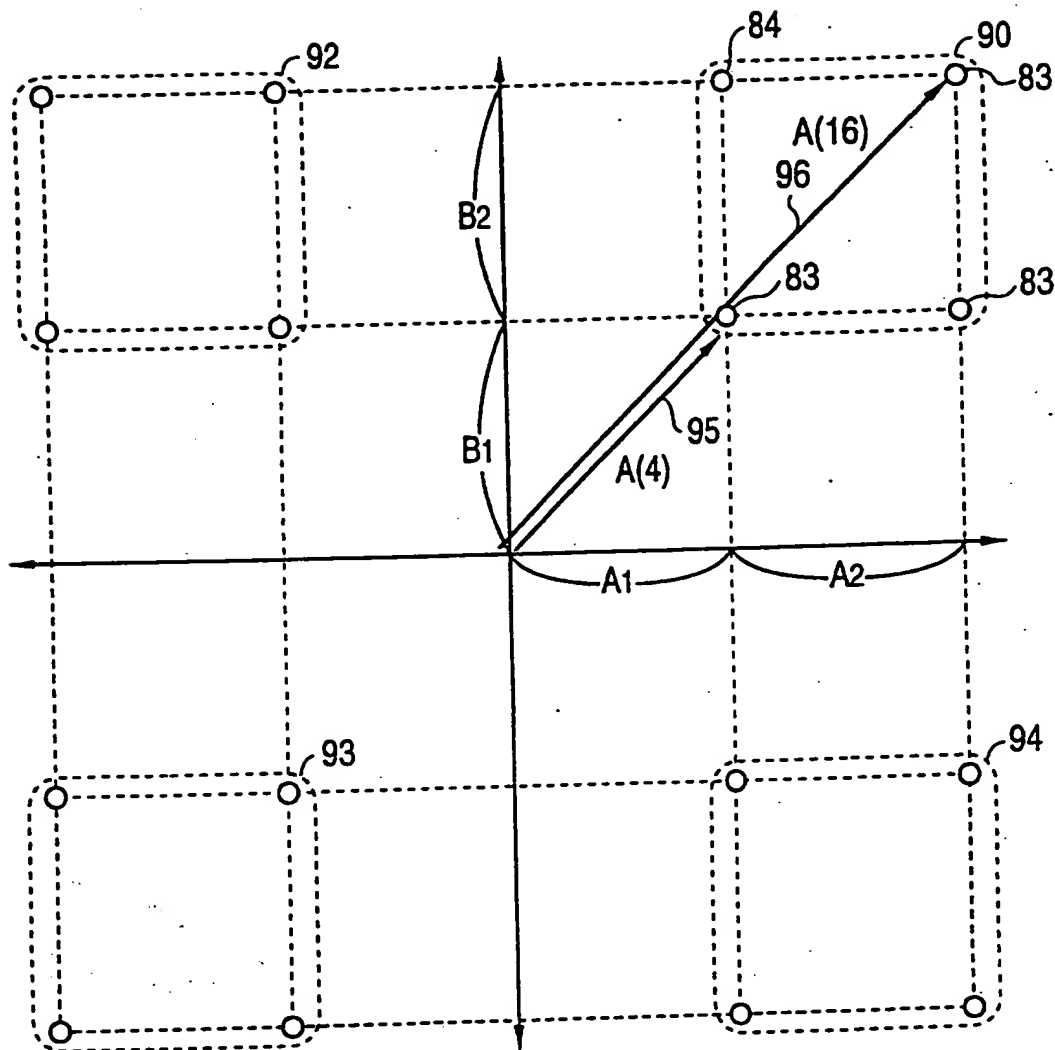
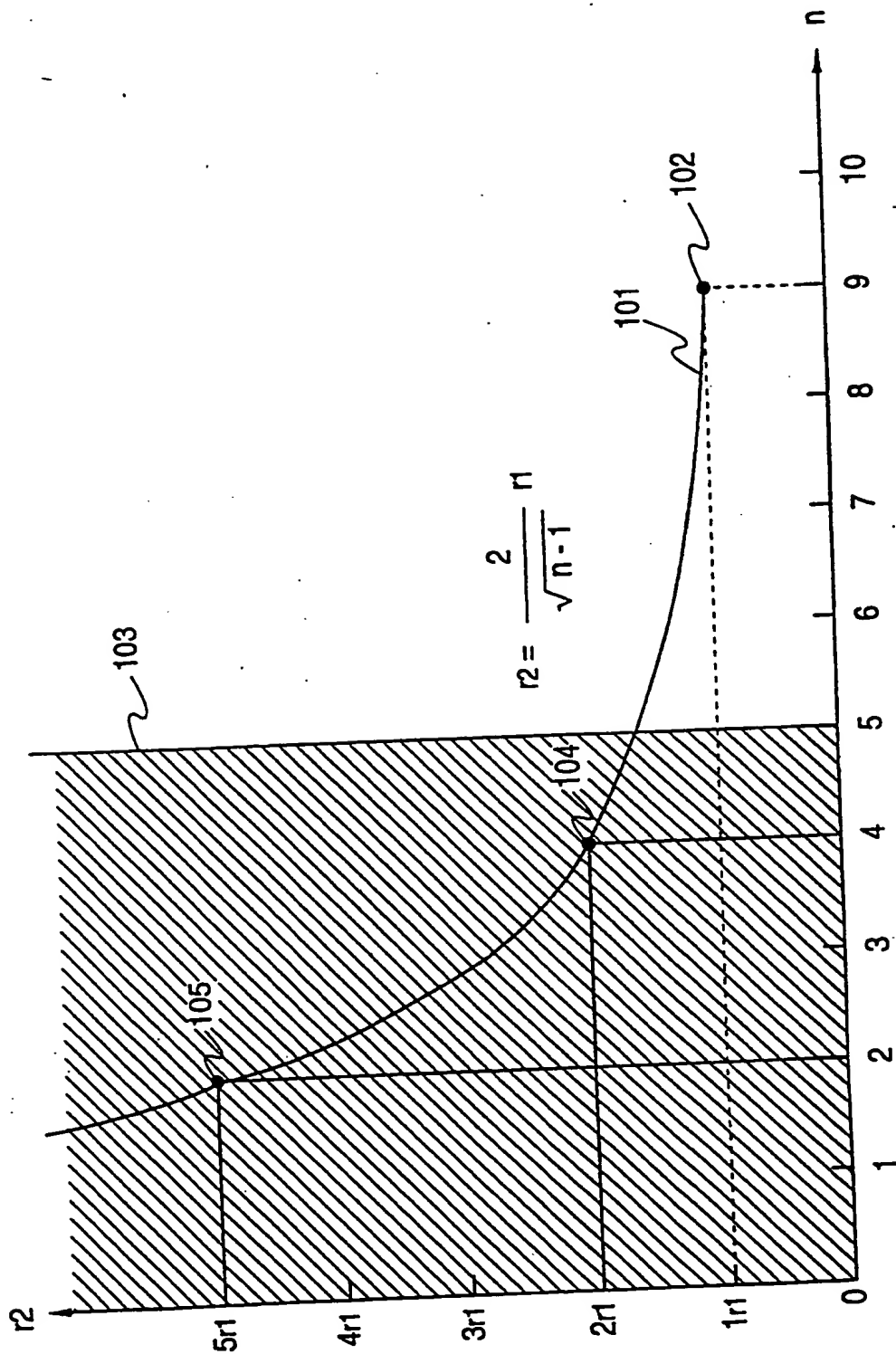




FIG. 11





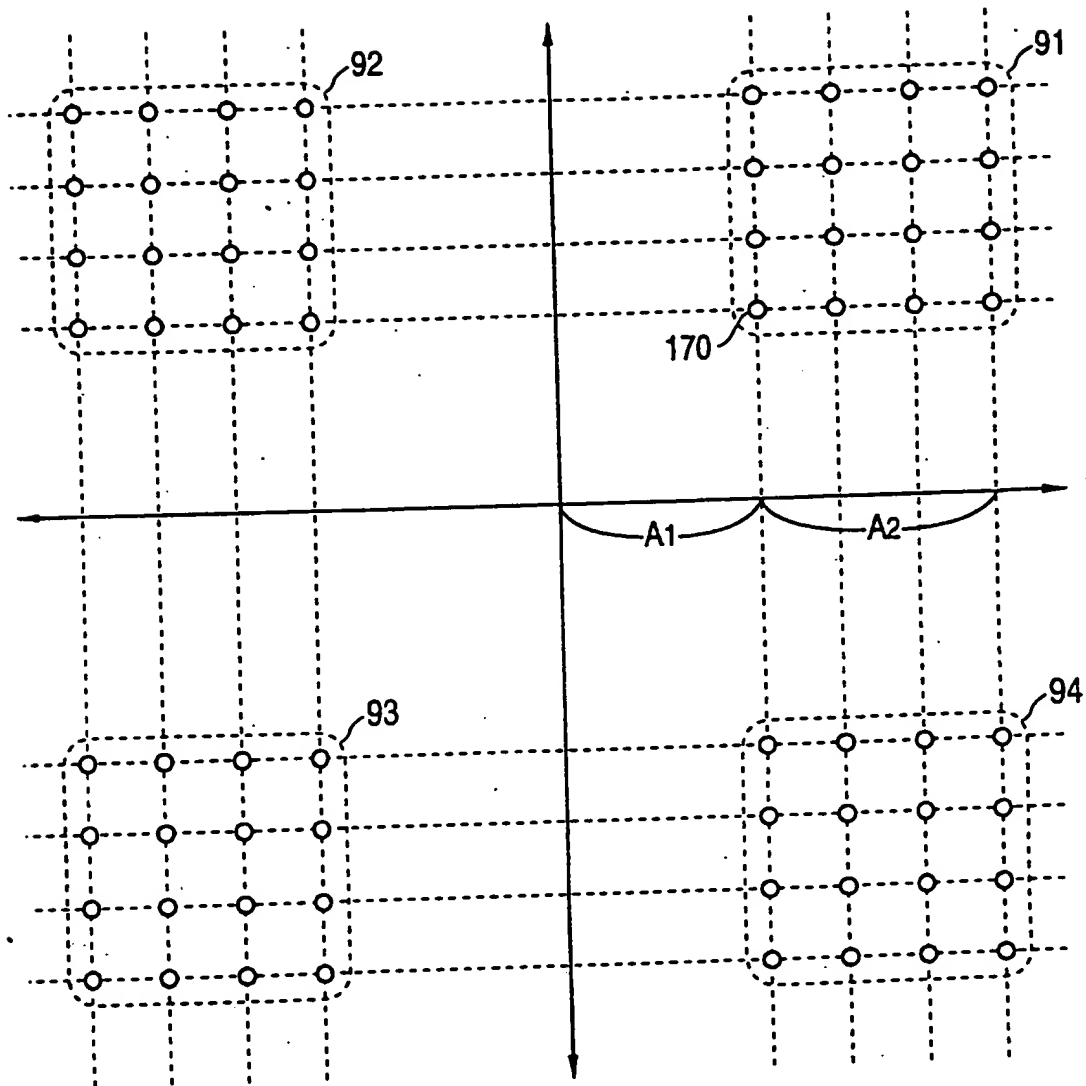
U.S. Patent

Feb. 4, 1997

Sheet 12 of 178

5,600,672

FIG. 12





U.S. Patent

Feb. 4, 1997

Sheet 13 of 178

5,600,672

FIG. 13

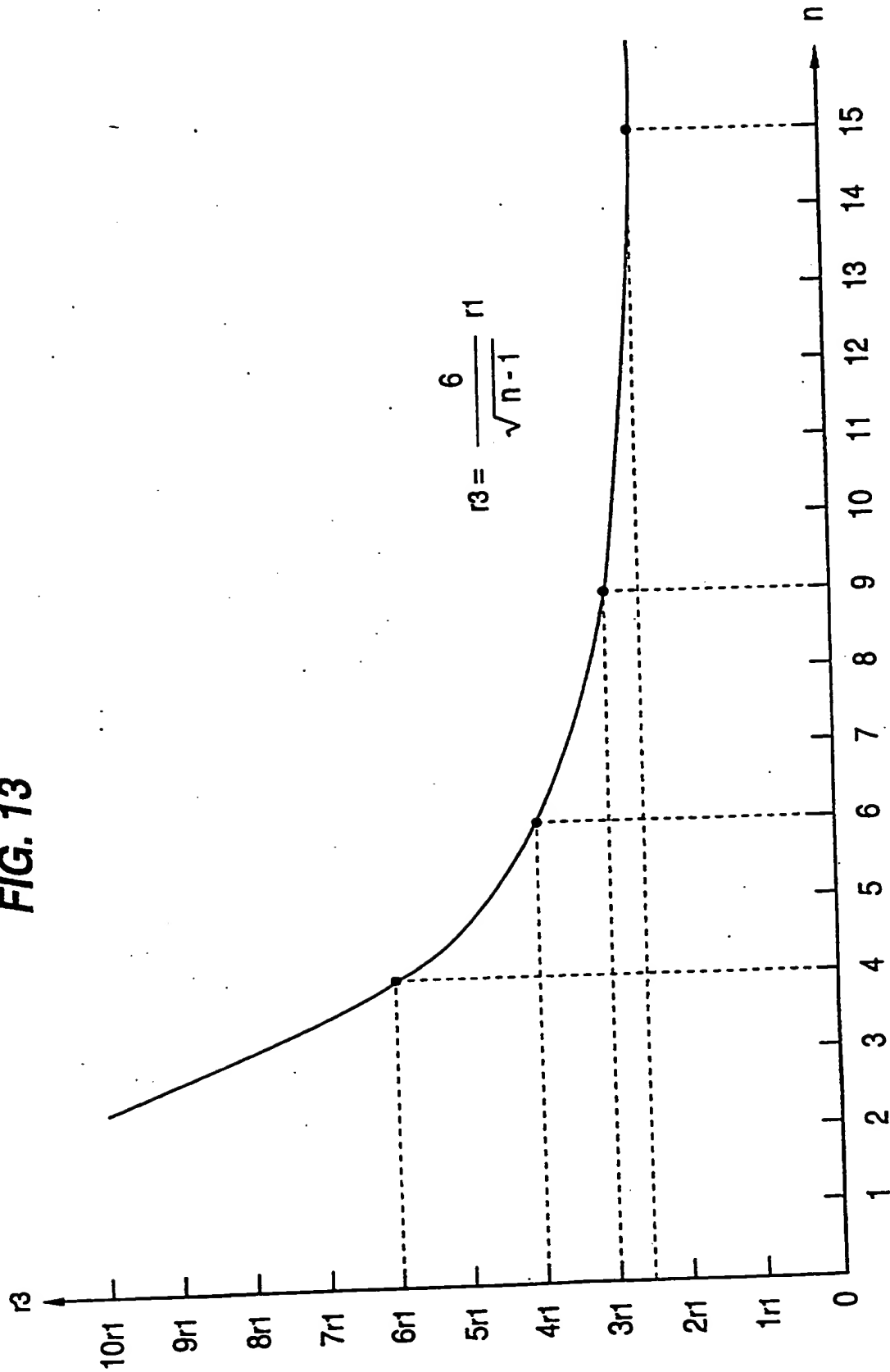




FIG. 14

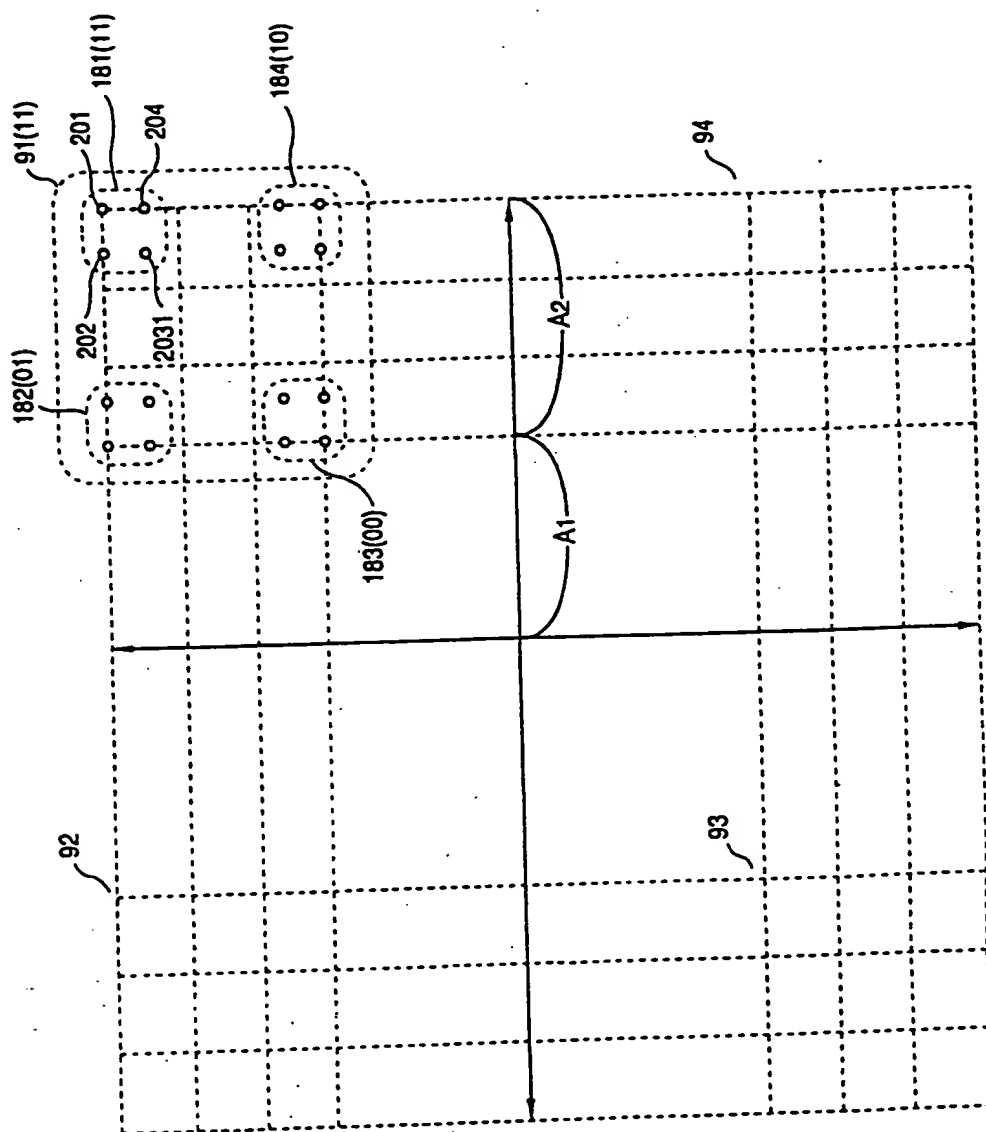




FIG. 15

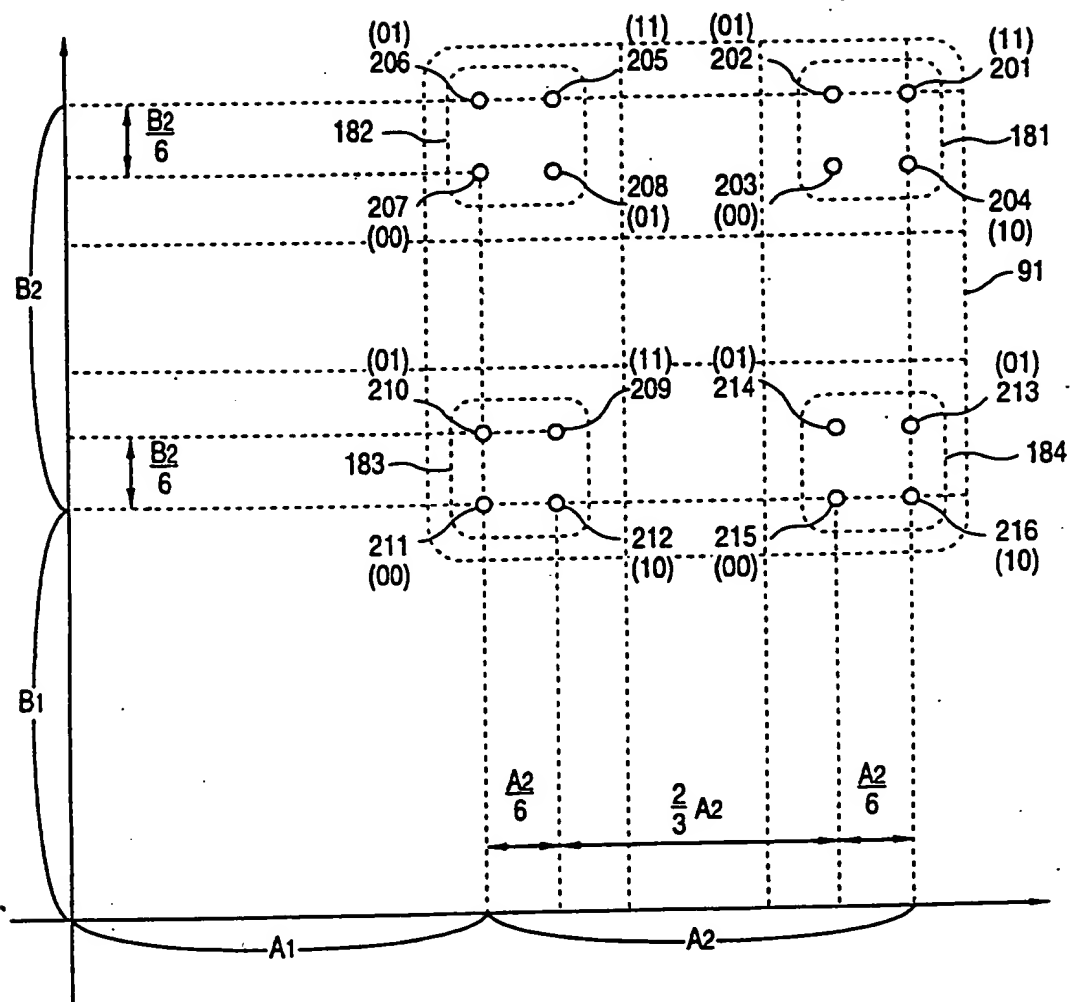




FIG. 16

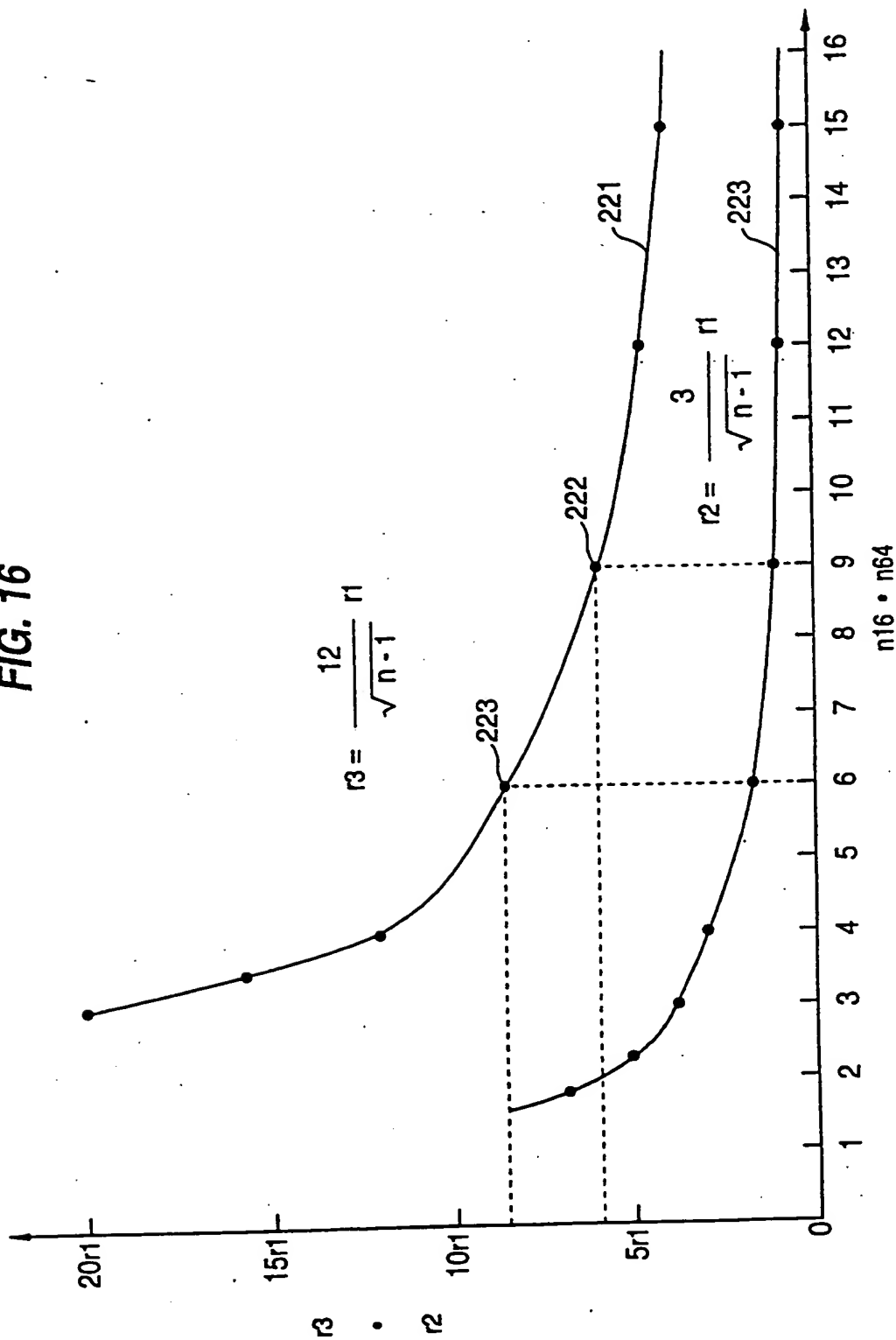




FIG. 17

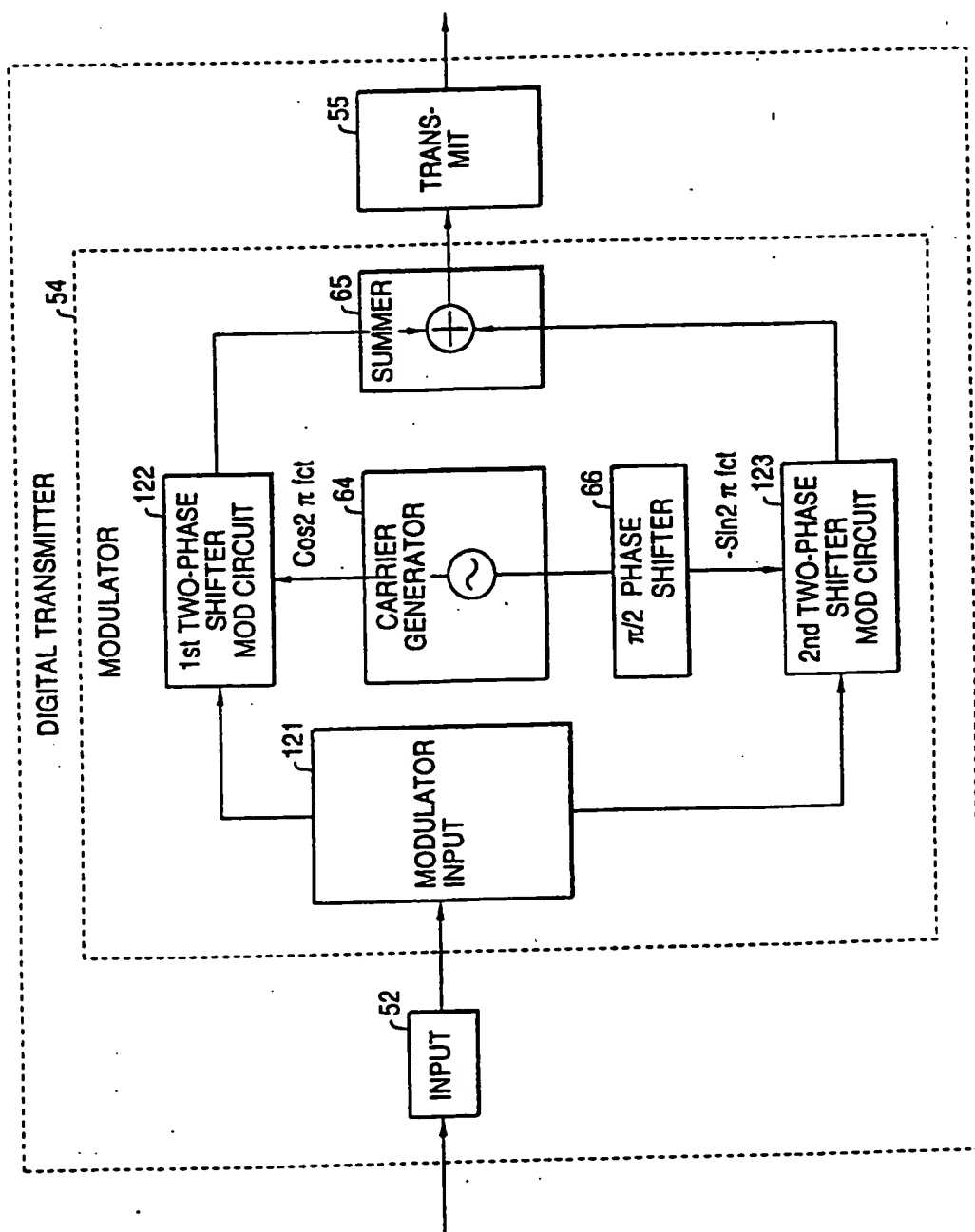




FIG. 18

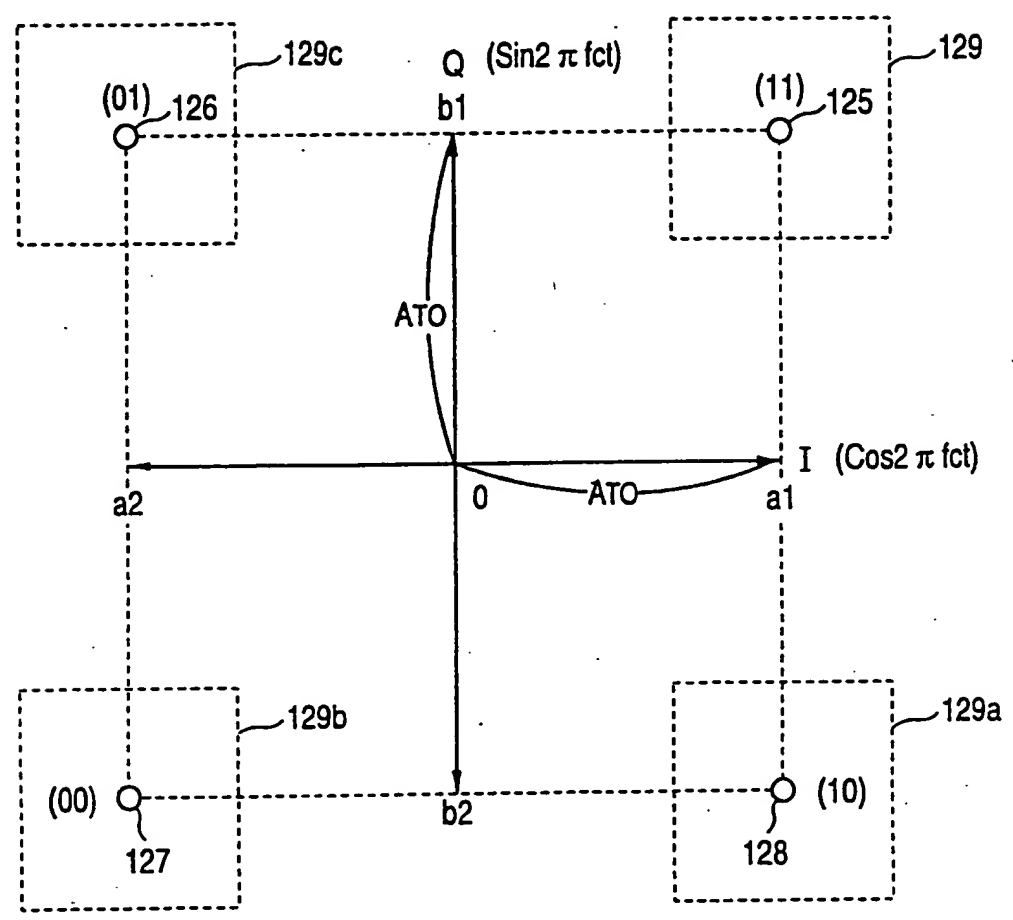




FIG. 19

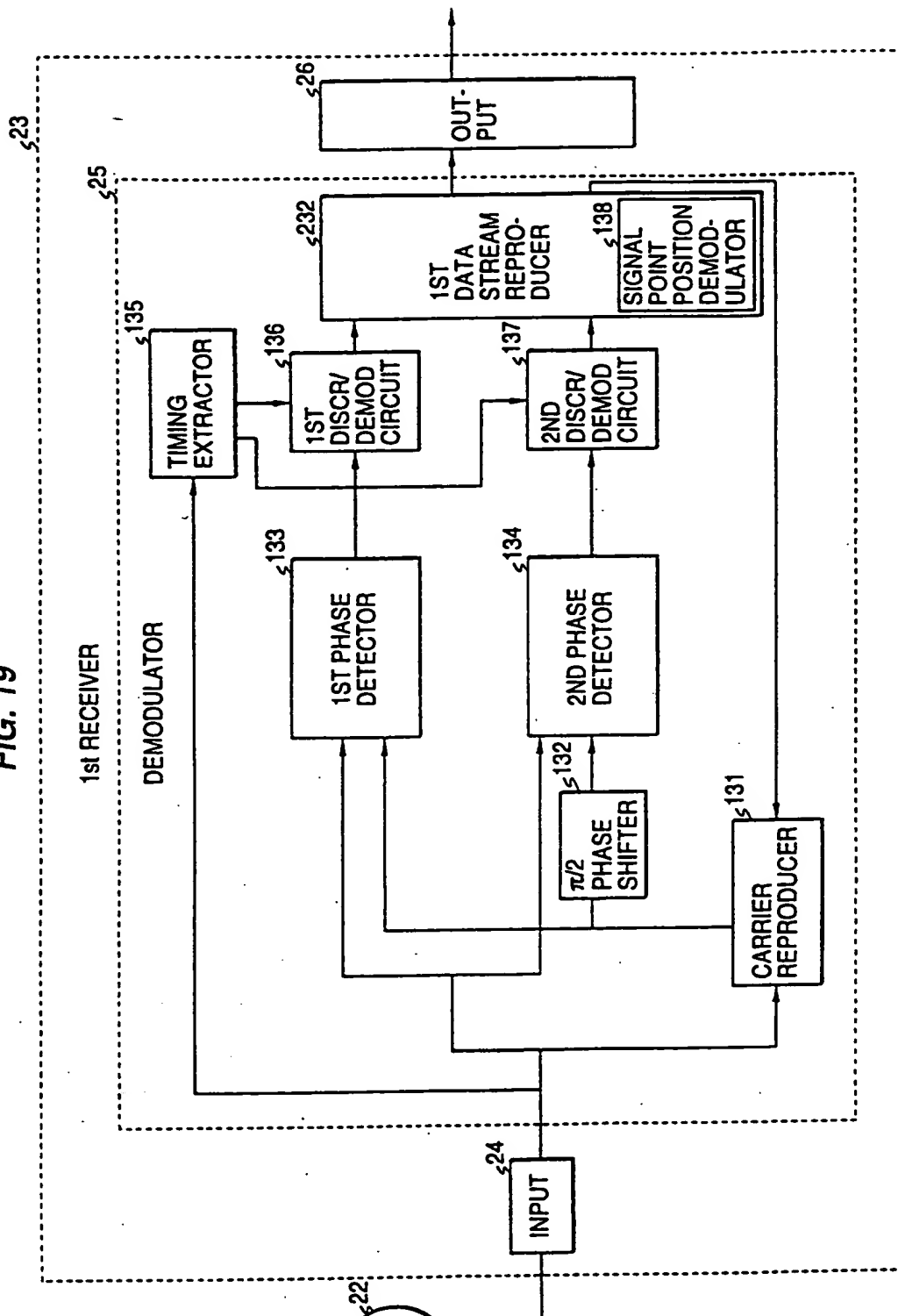




FIG. 20

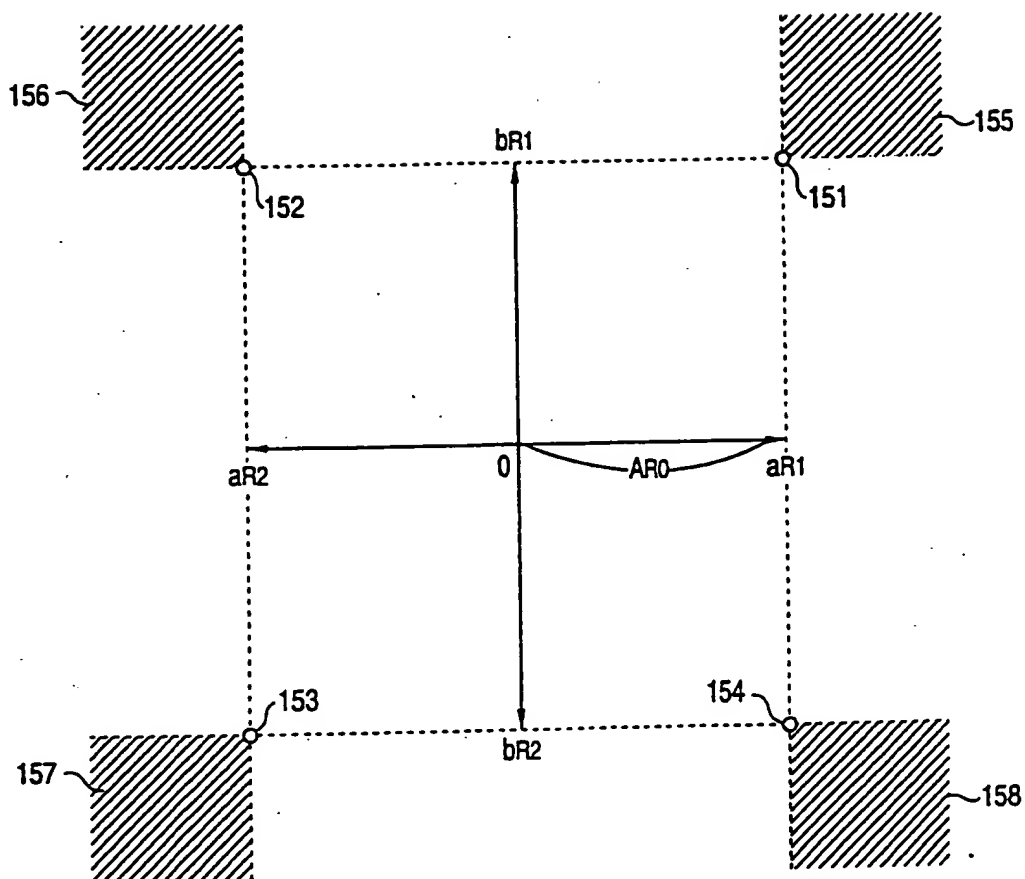




FIG. 21

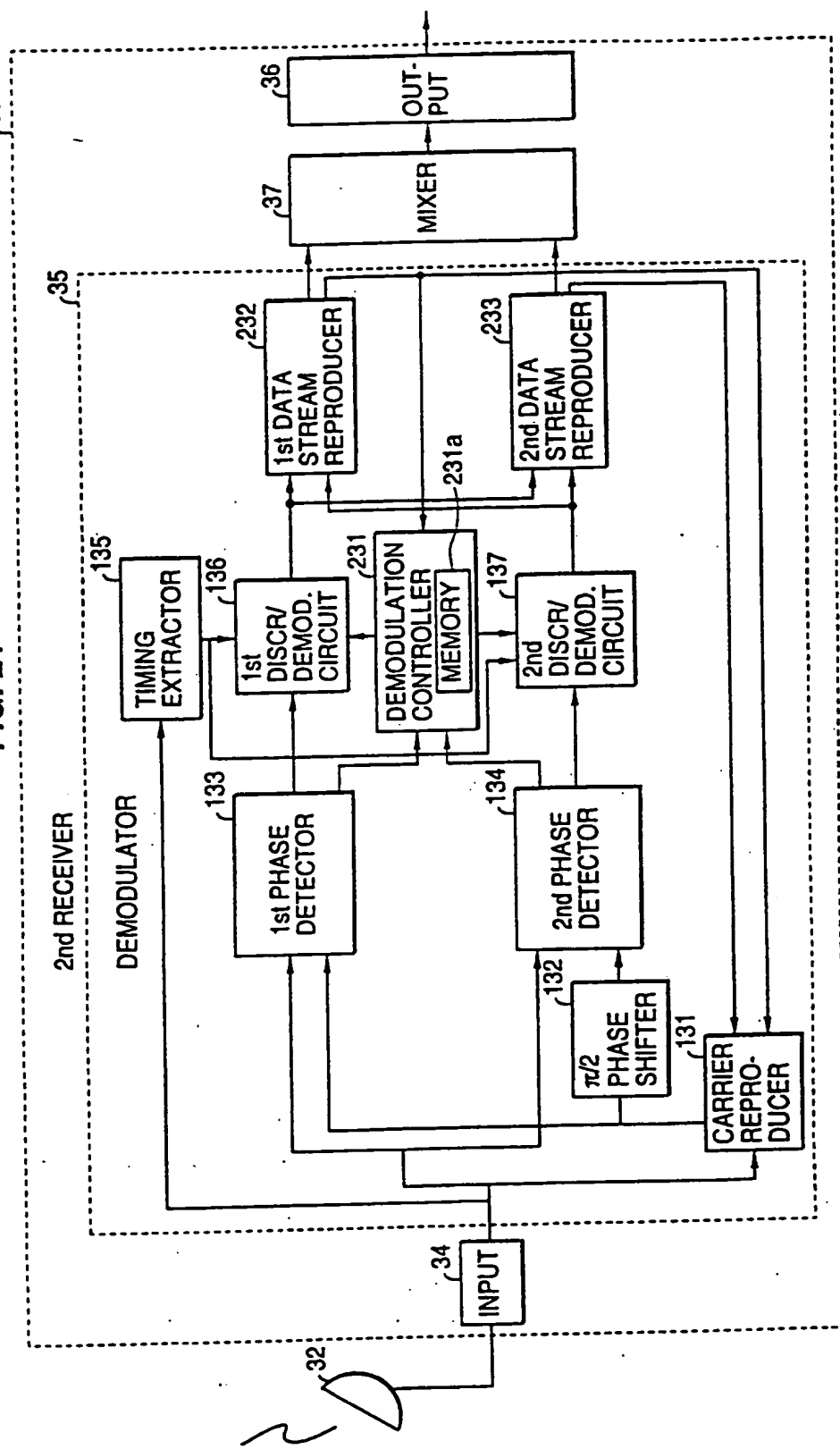




FIG. 22

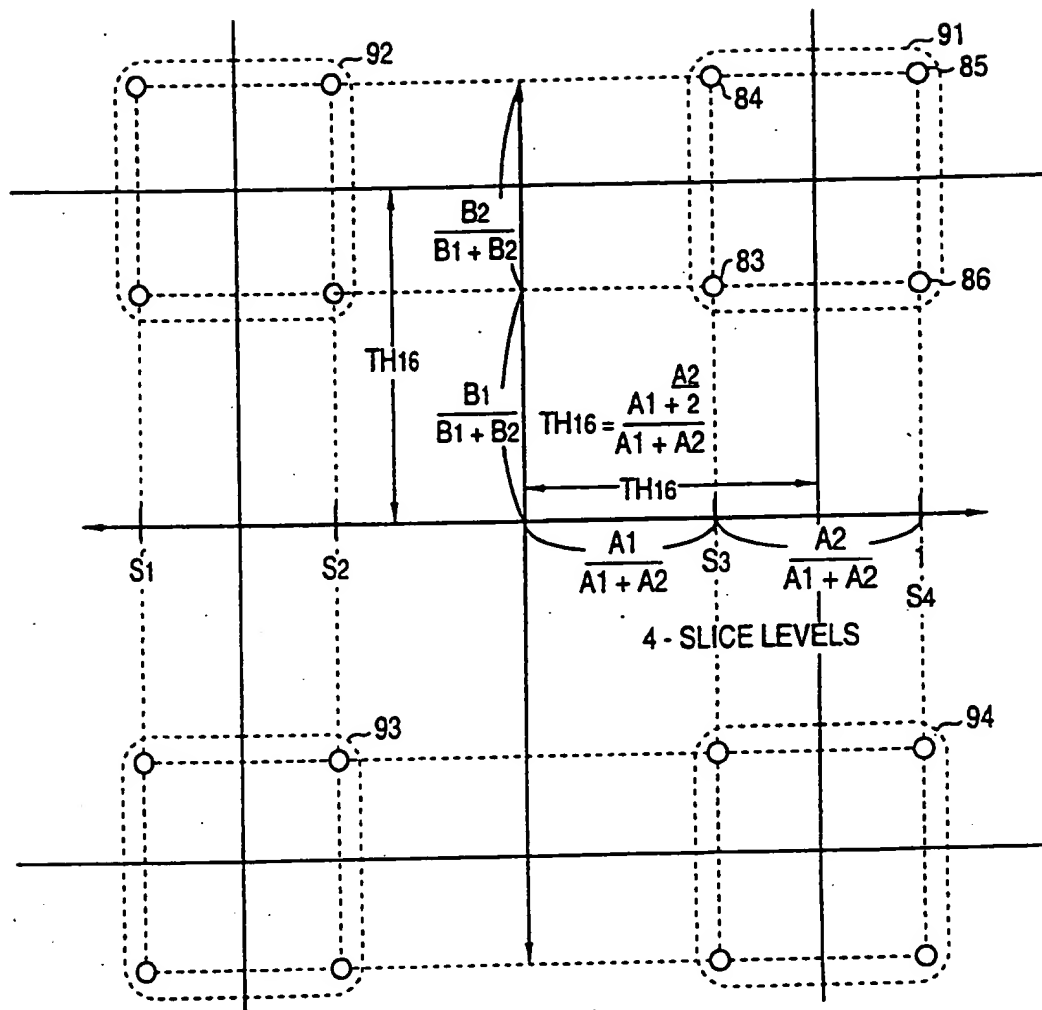




FIG. 23

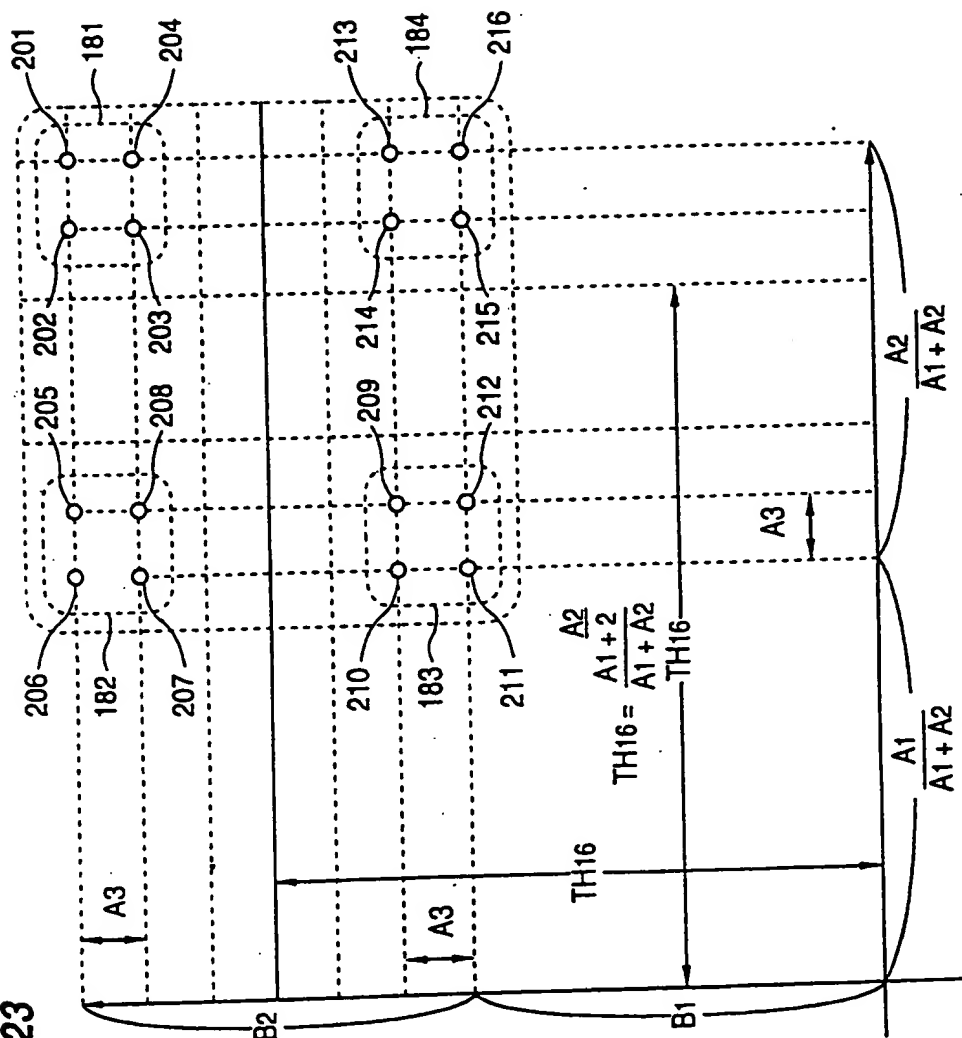
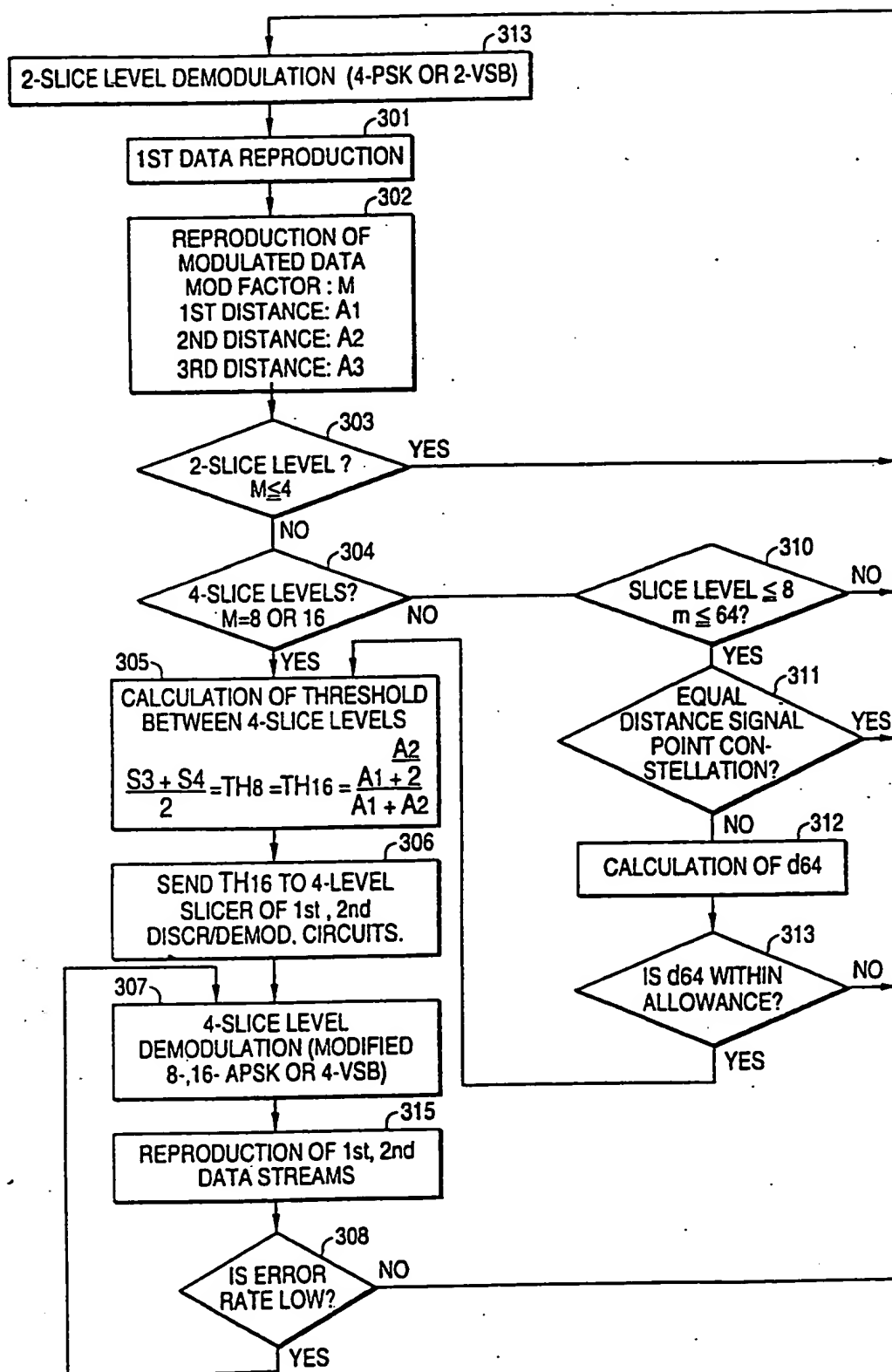


FIG. 24



O I P E J C 8 7
OCT 24 2002
PATENT & TRADEMARK

FIG. 25(a)

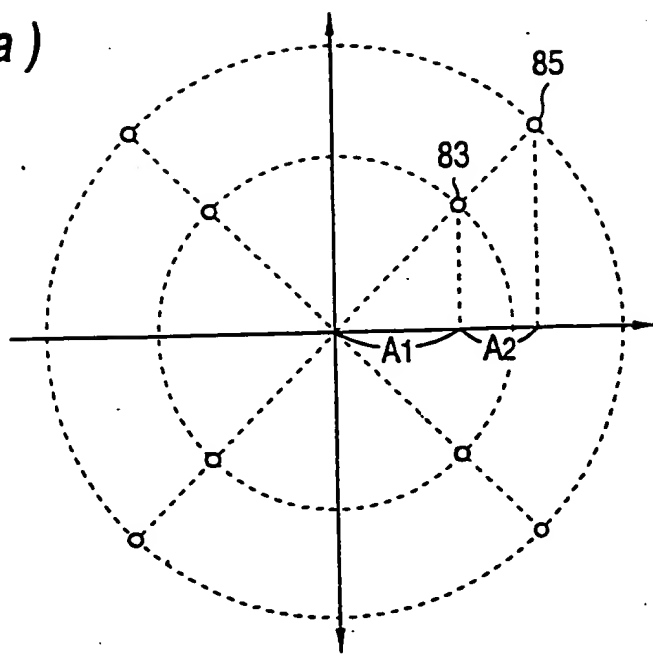


FIG. 25(b)

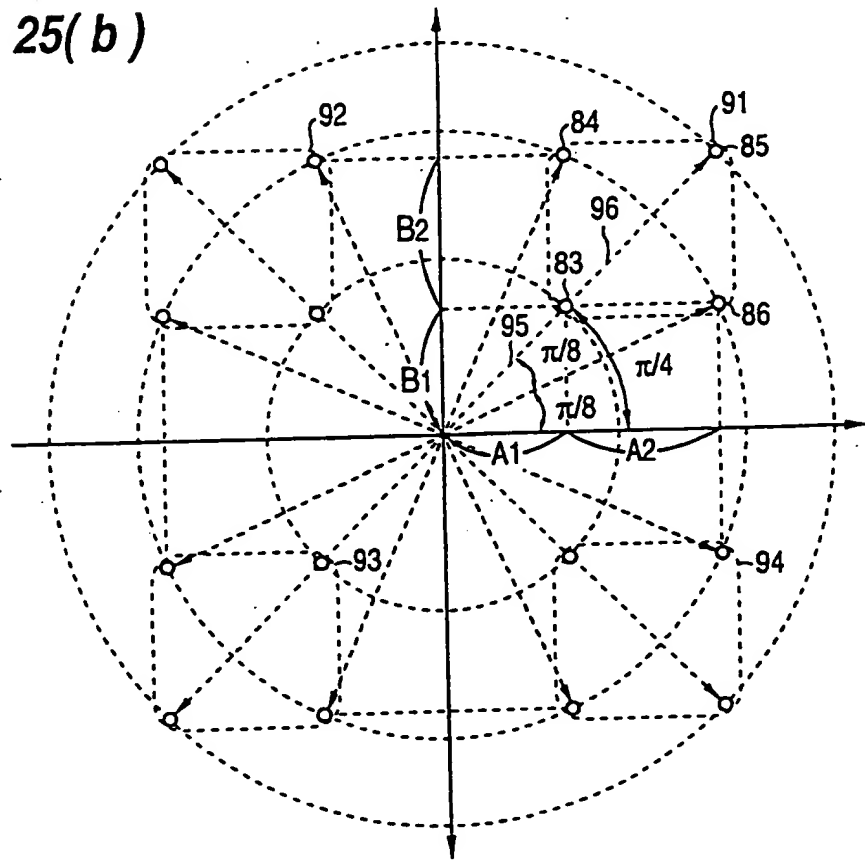
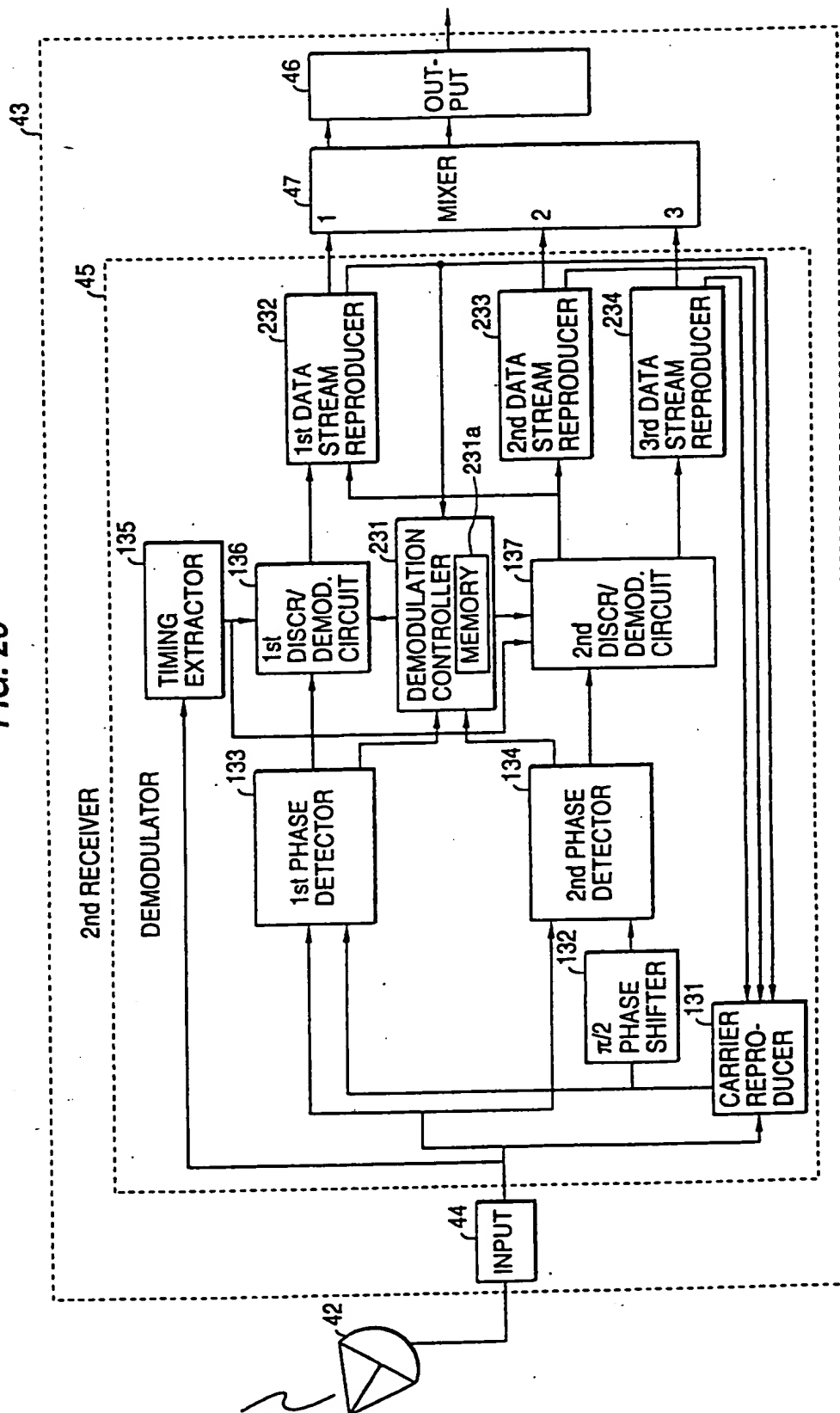




FIG. 26



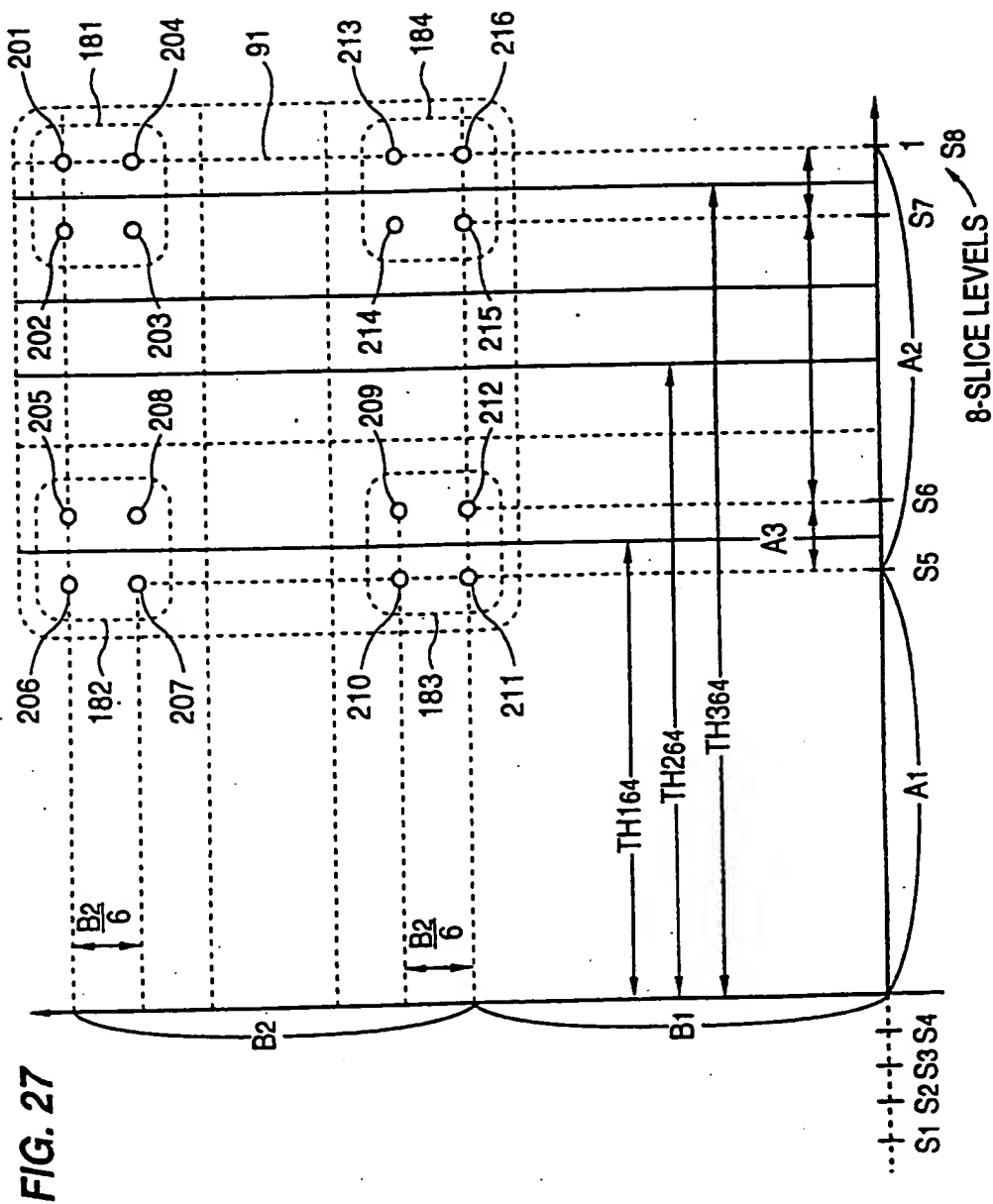
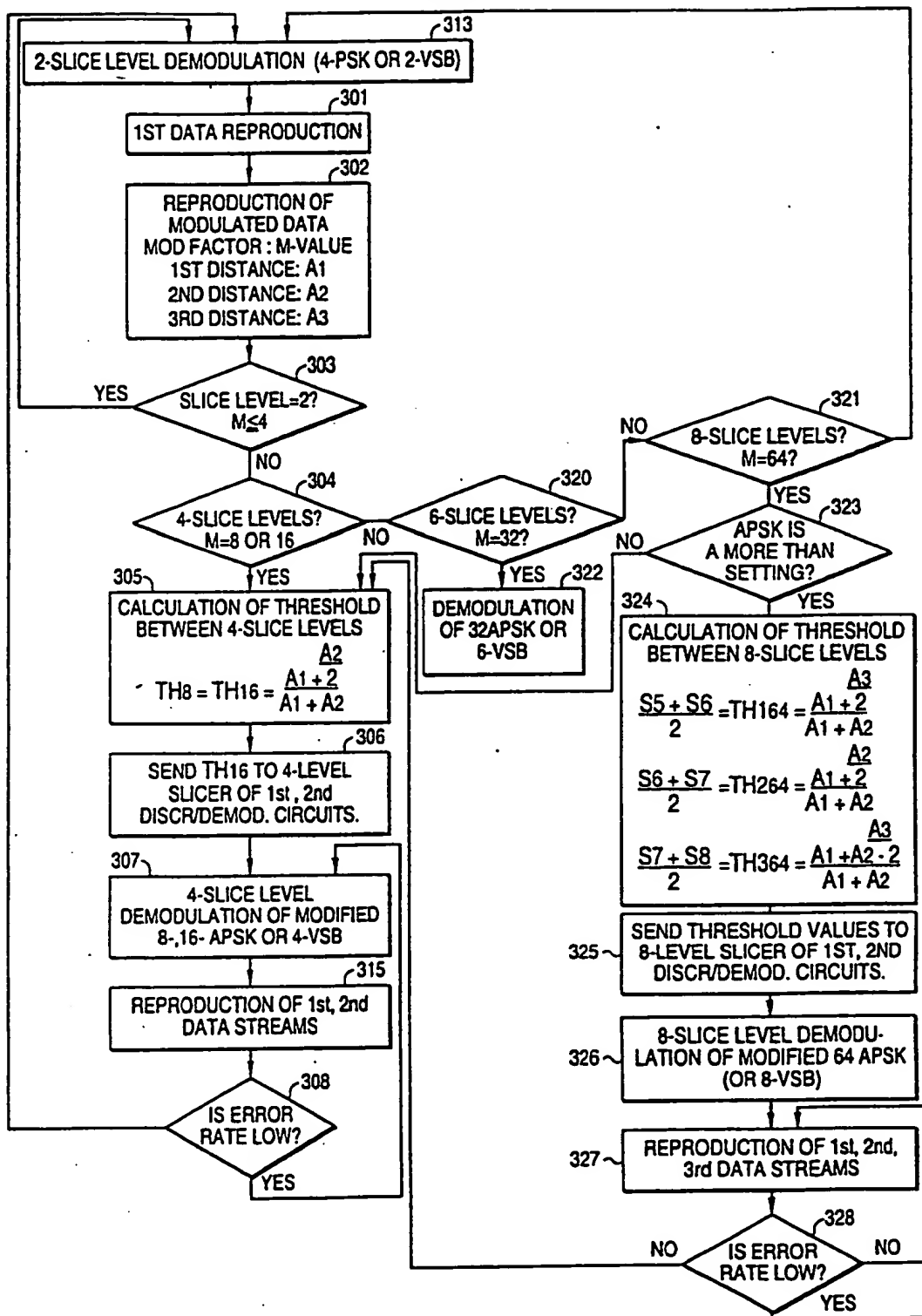




FIG. 28



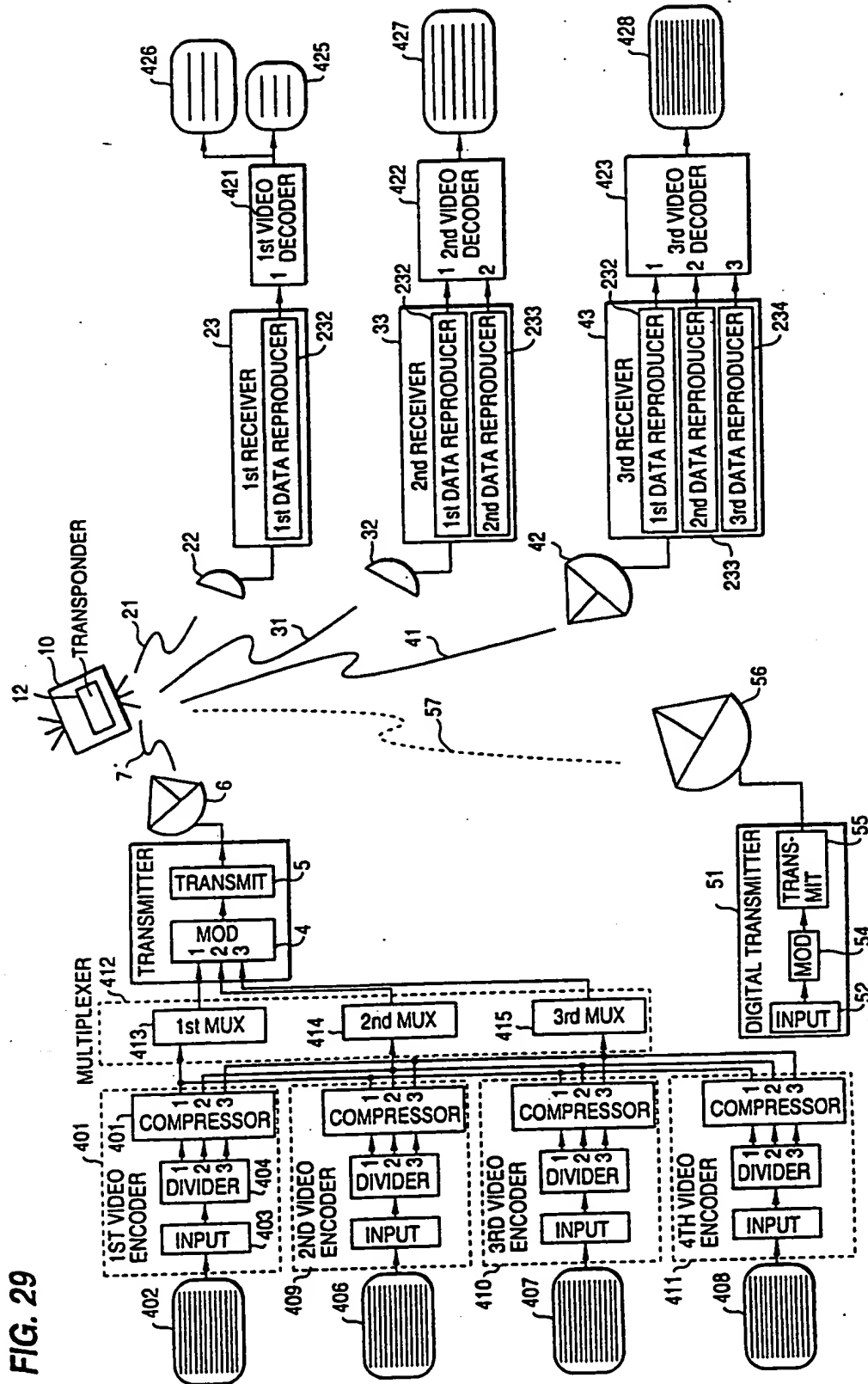
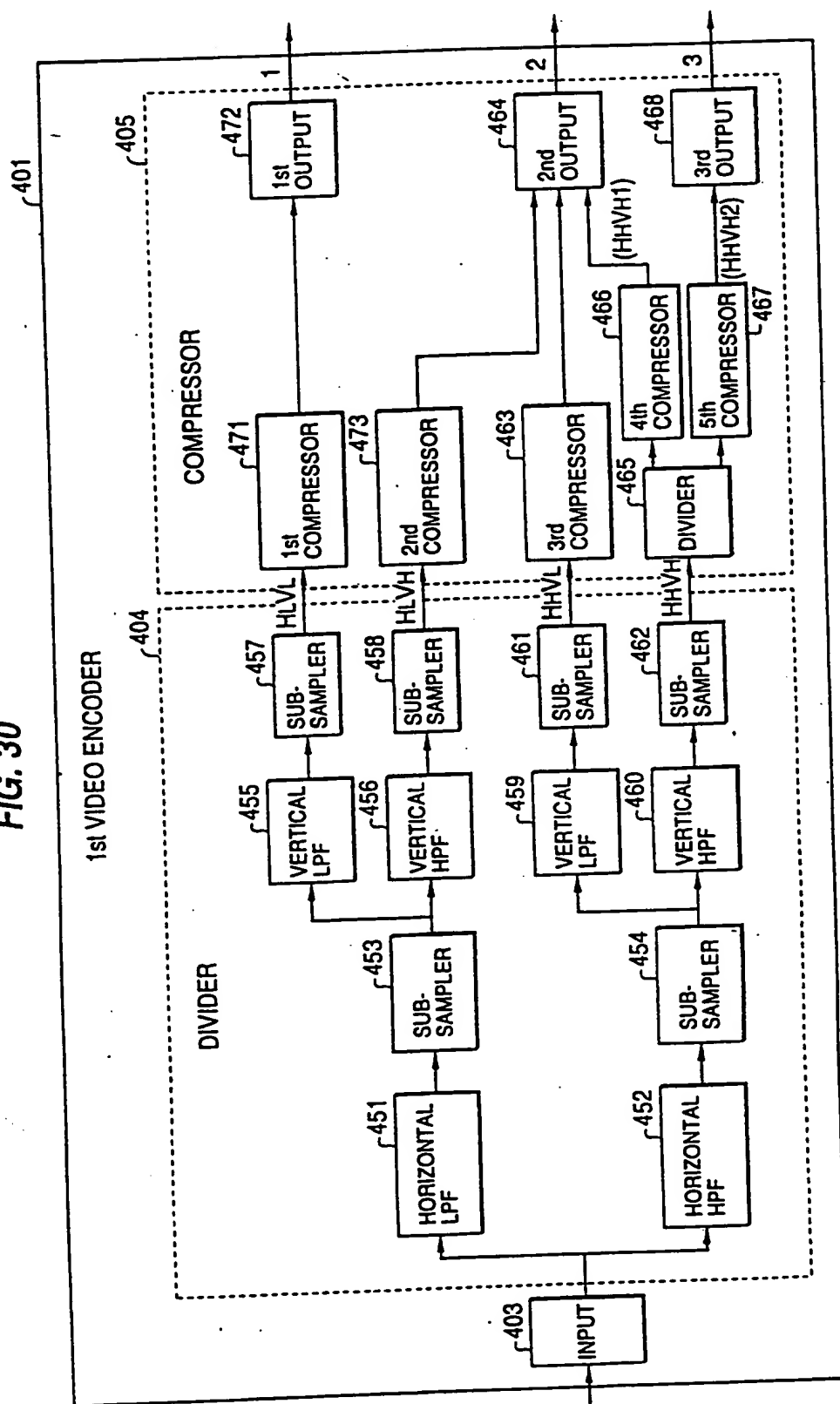


FIG. 29



FIG. 30





U.S. Patent

Feb. 4, 1997

Sheet 31 of 178

5,600,672

FIG. 31

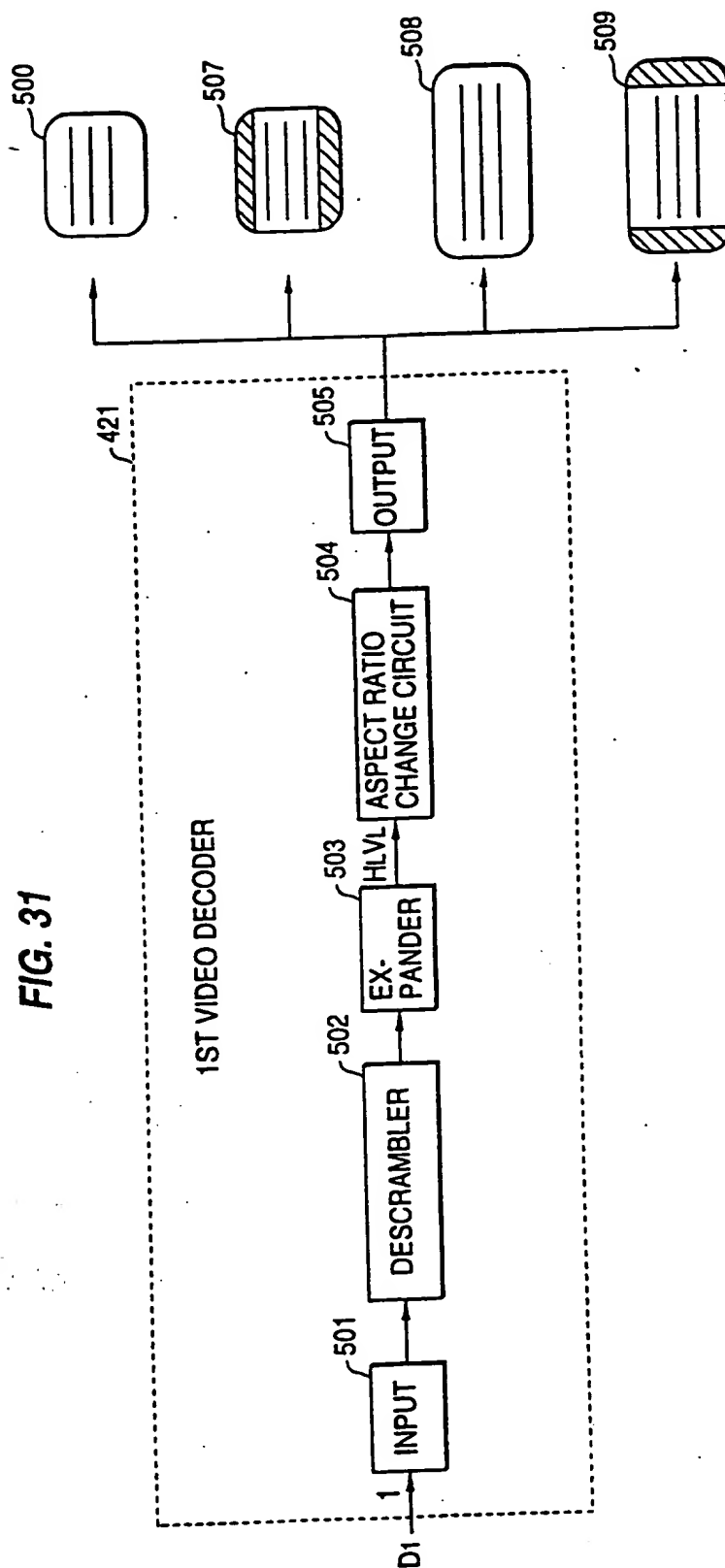


FIG. 32

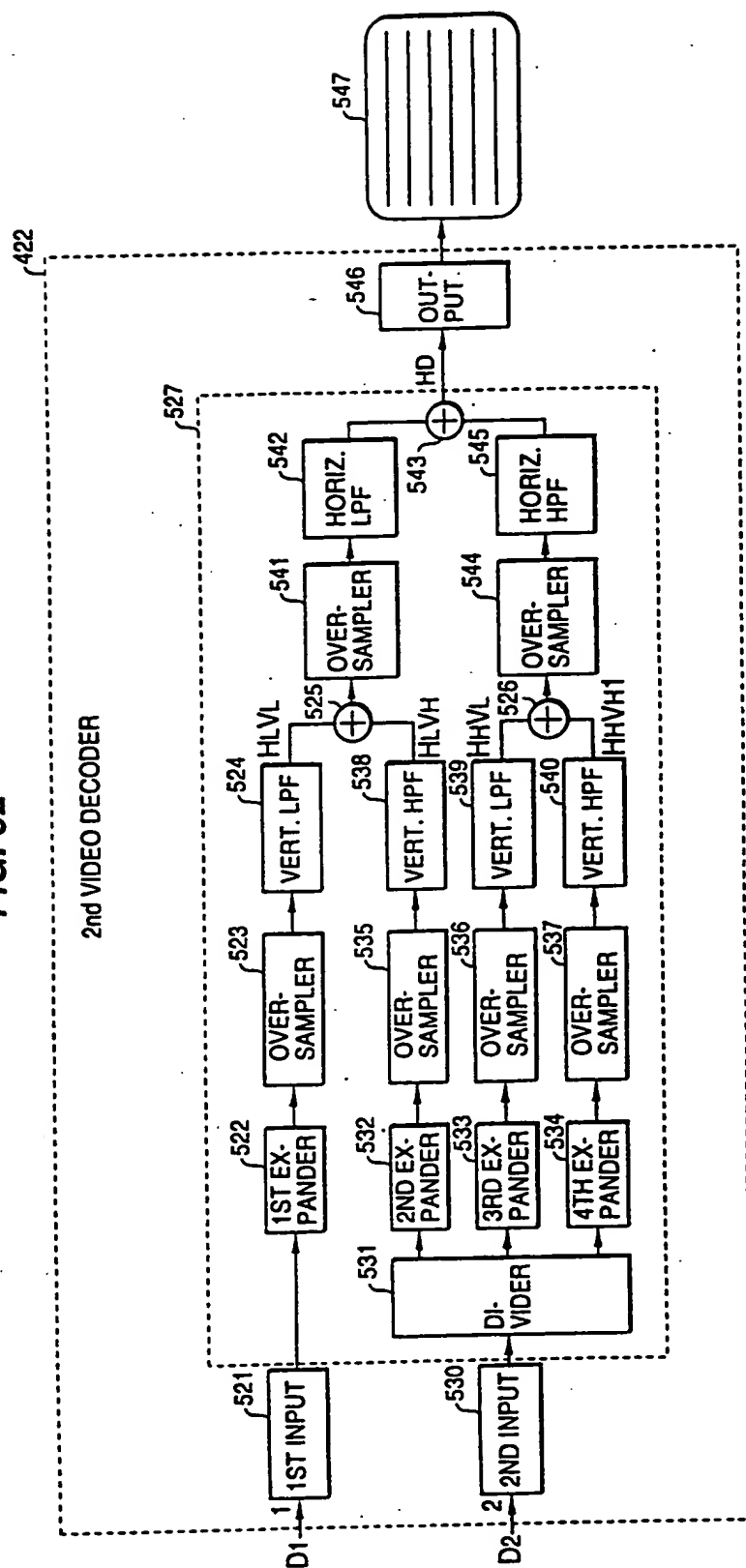




FIG. 33

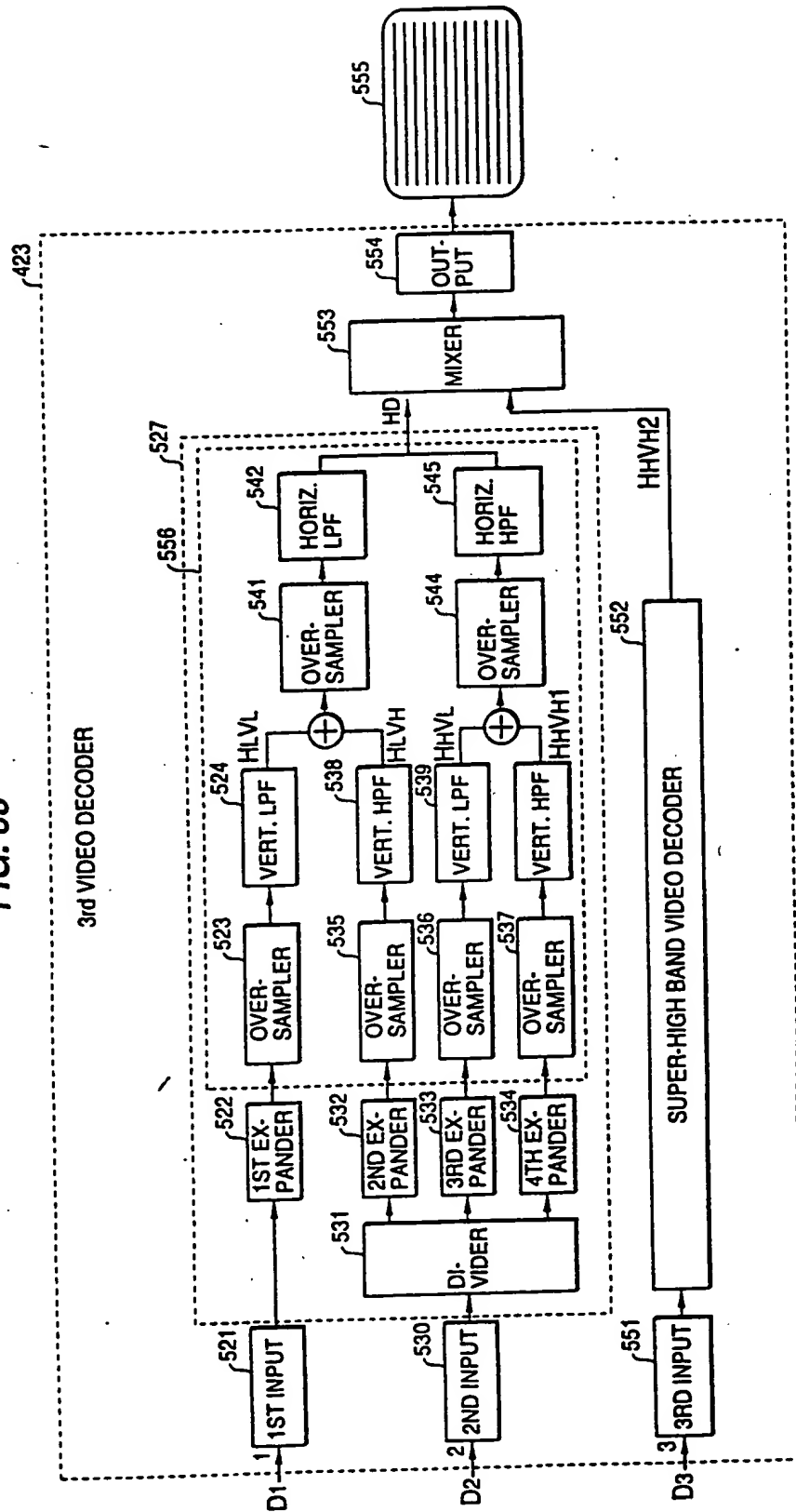




FIG. 34

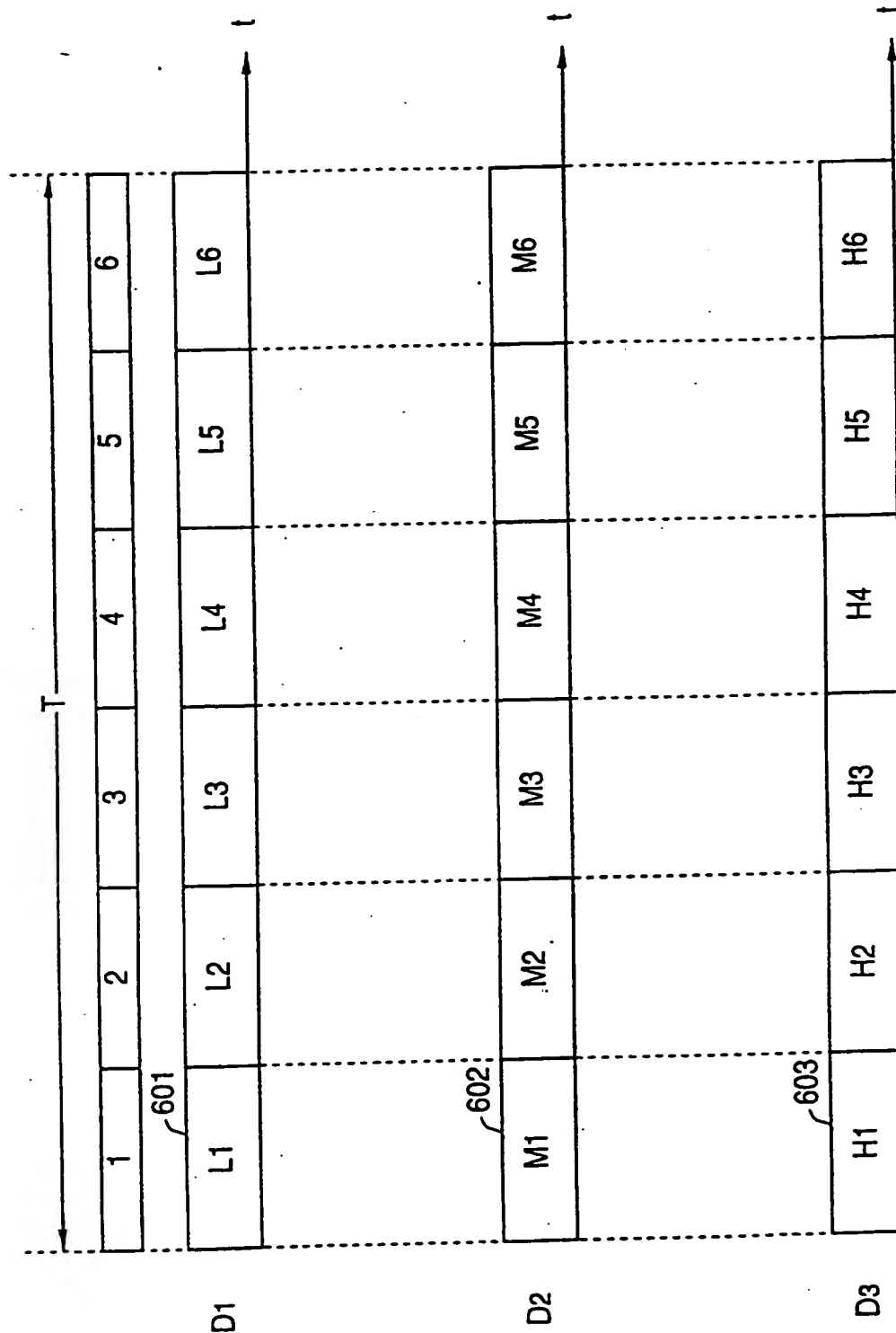




FIG. 35

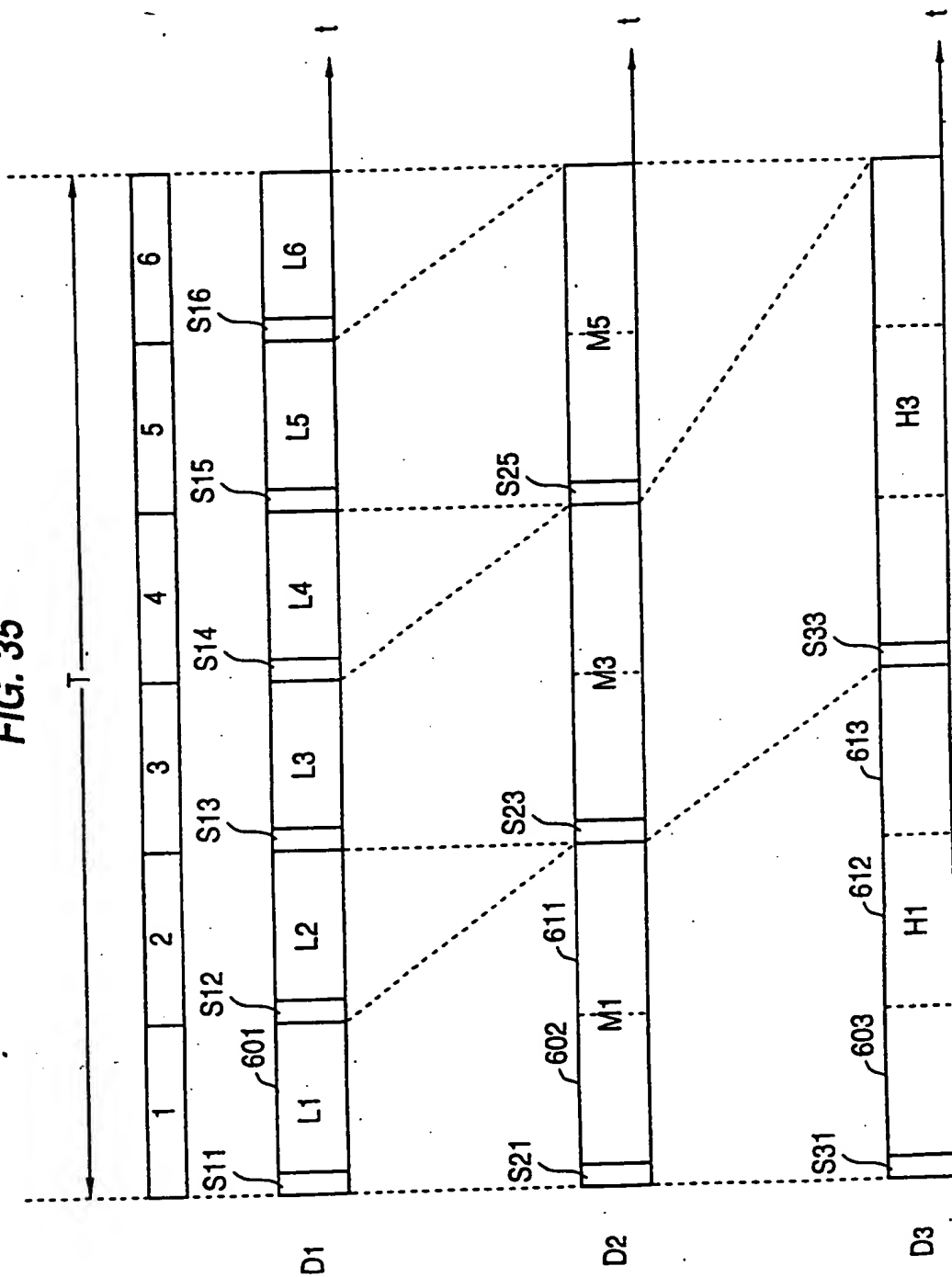




FIG. 36

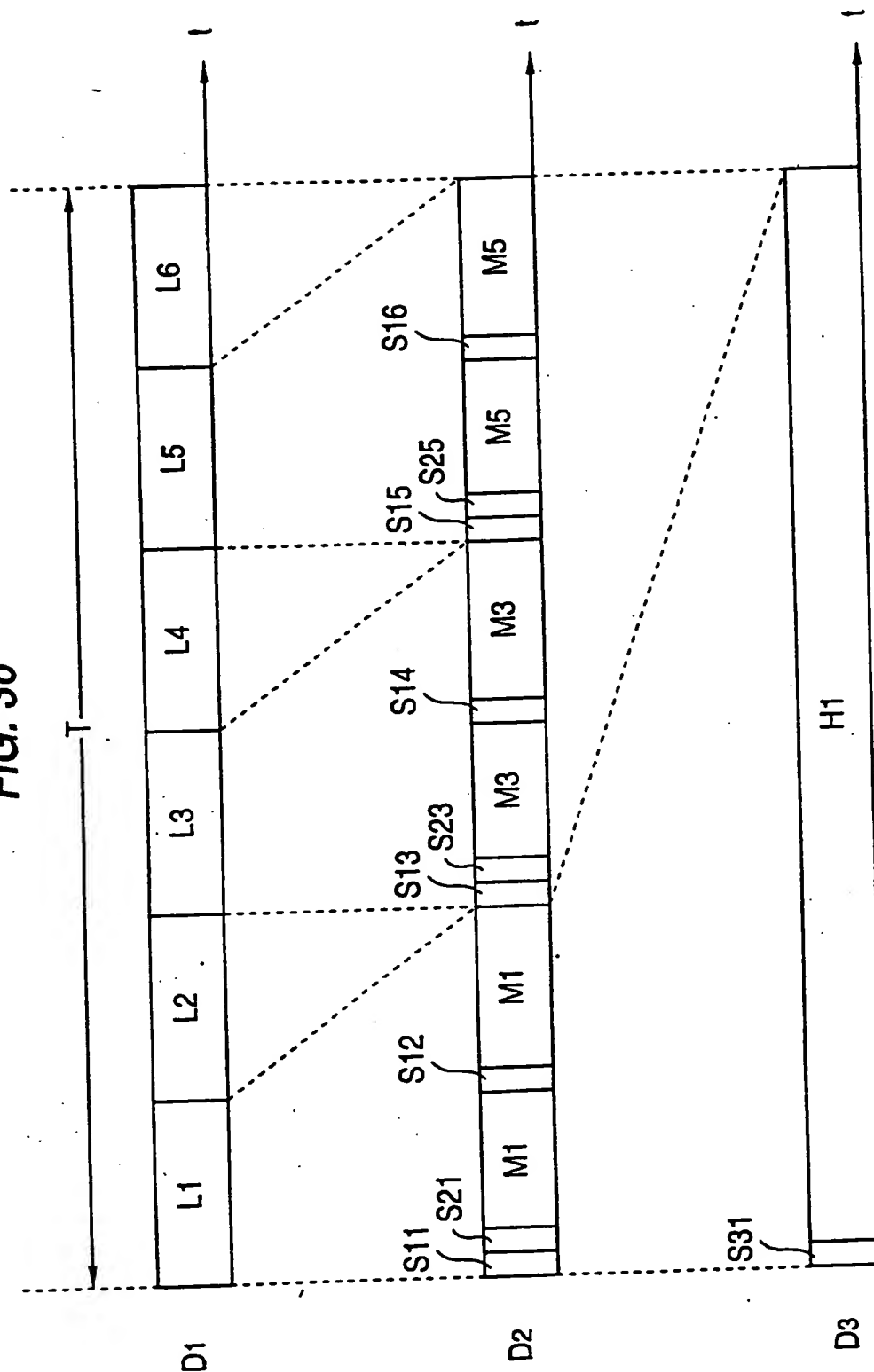




FIG. 37

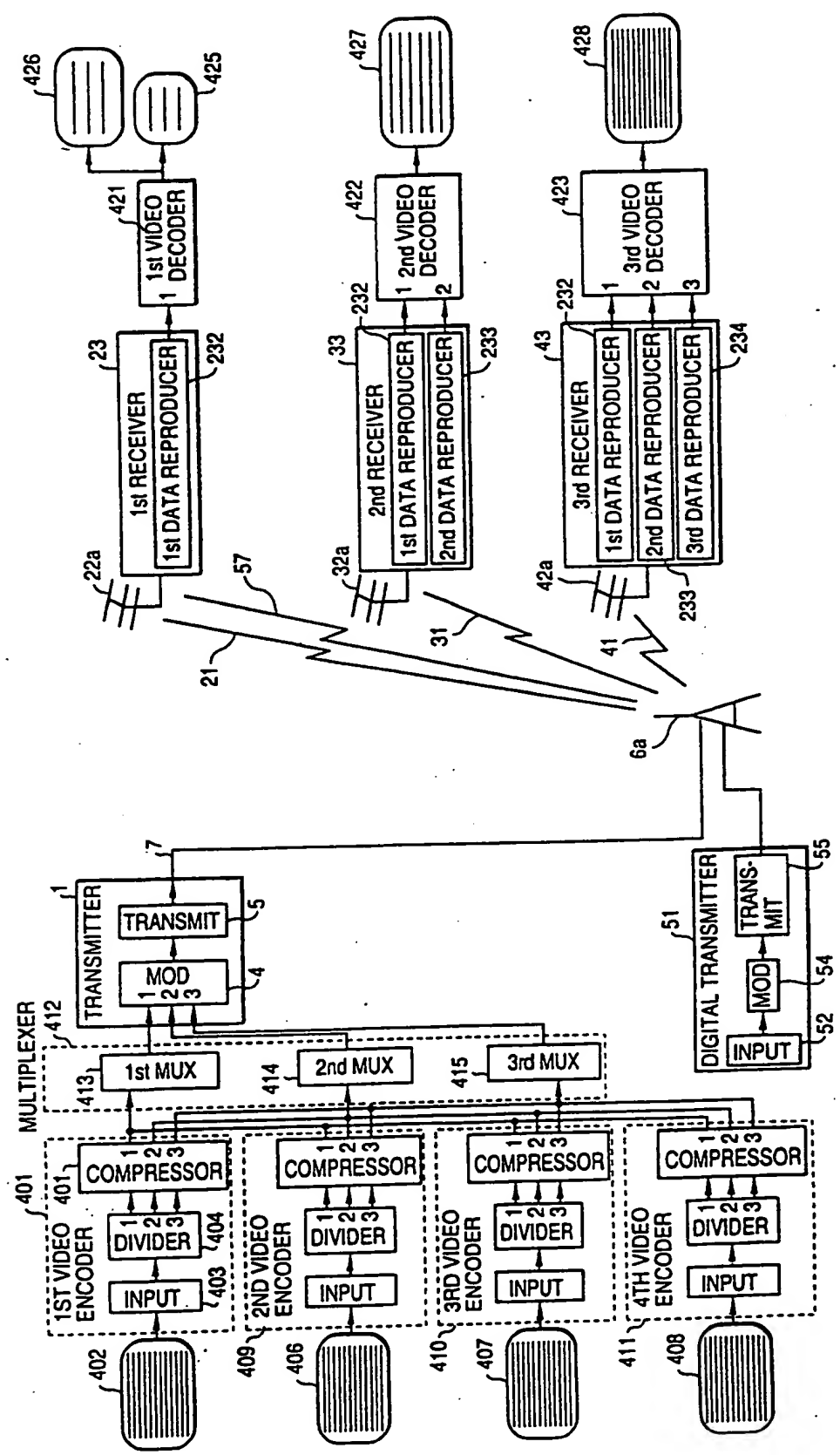




FIG. 38

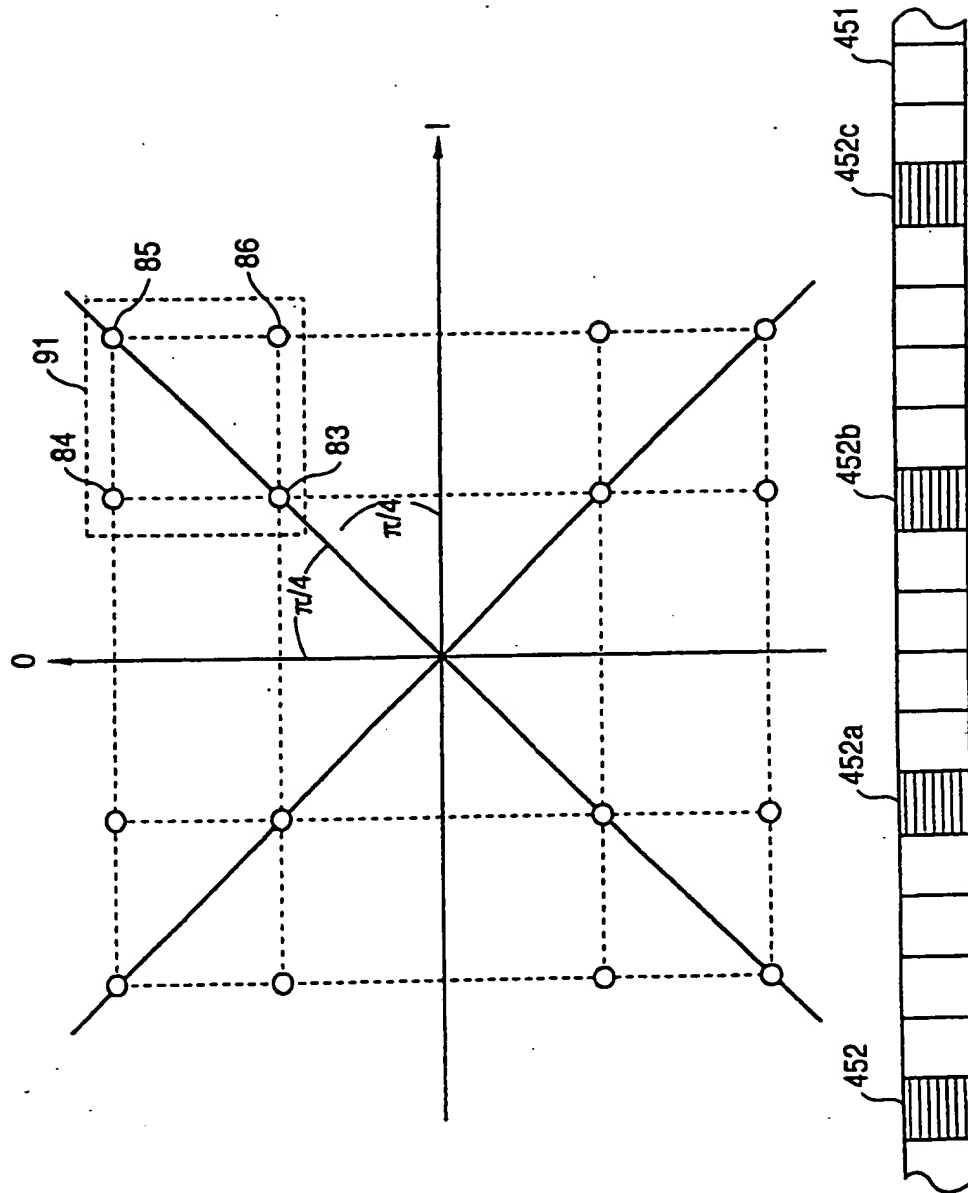




FIG. 39

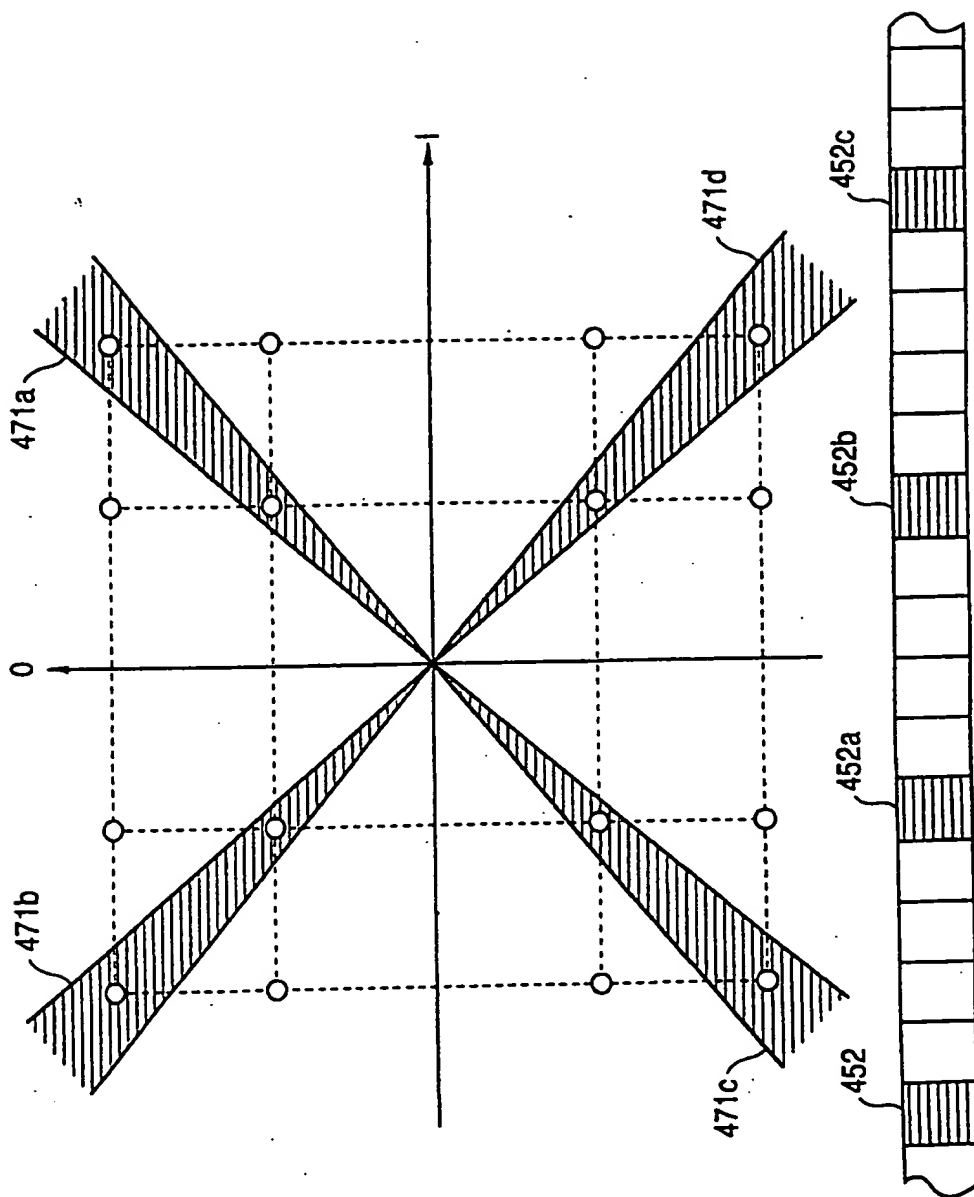
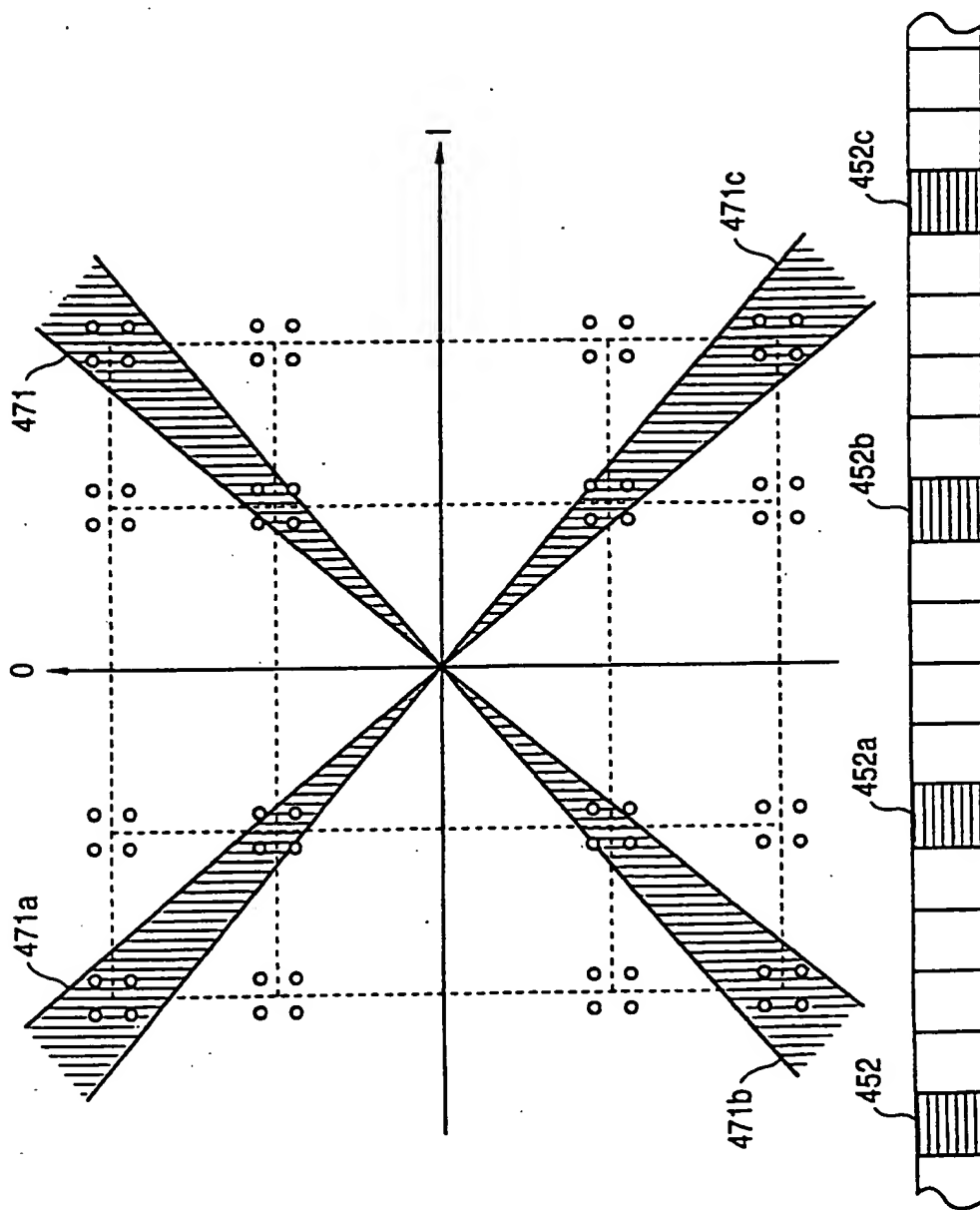




FIG. 40



O I P E J C 8 7
OCT 24 2002
PATENT & TRADEMARK OFFICE

U.S. Patent

Feb. 4, 1997

Sheet 41 of 178

5,600,672

FIG. 41

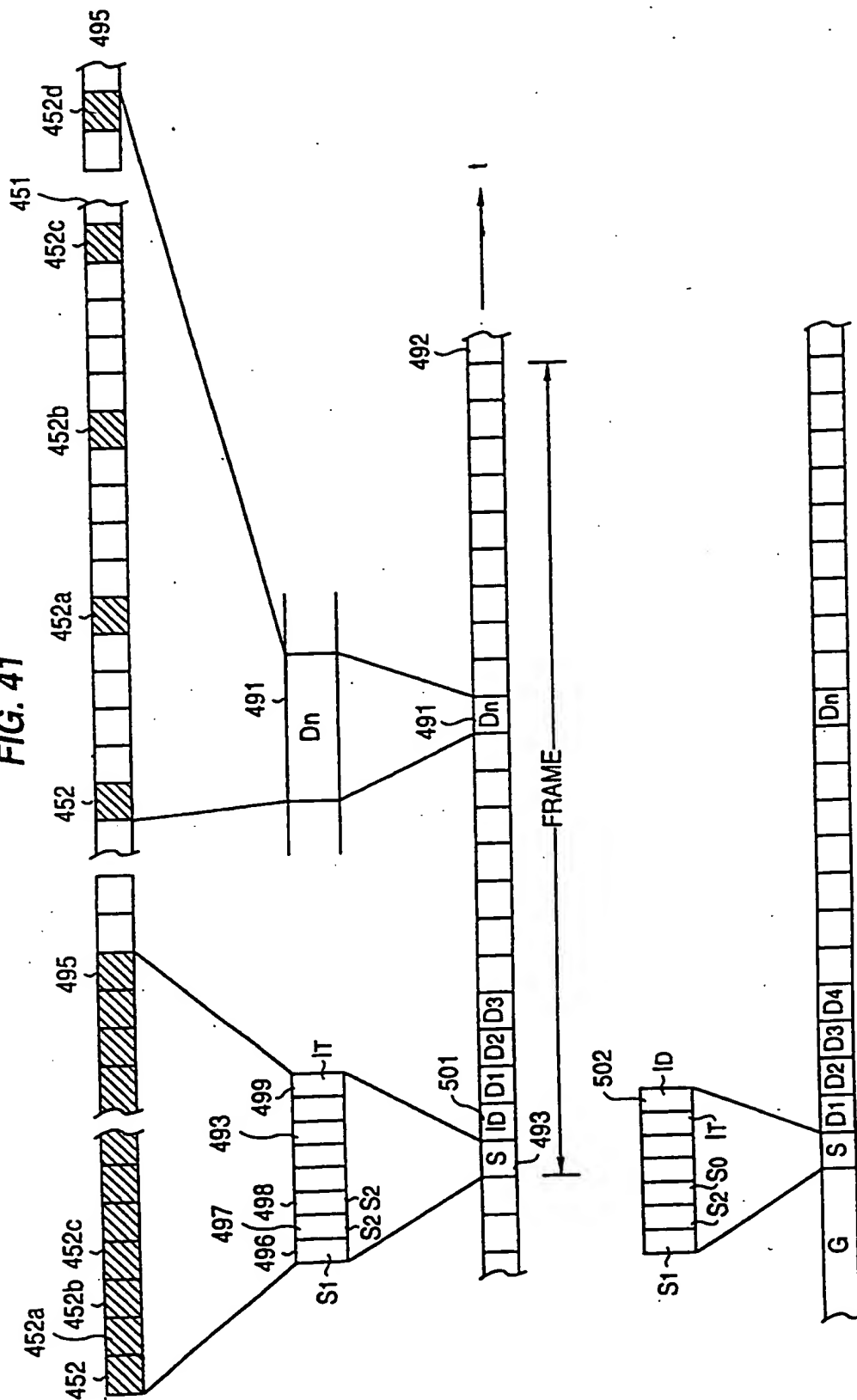




FIG. 42

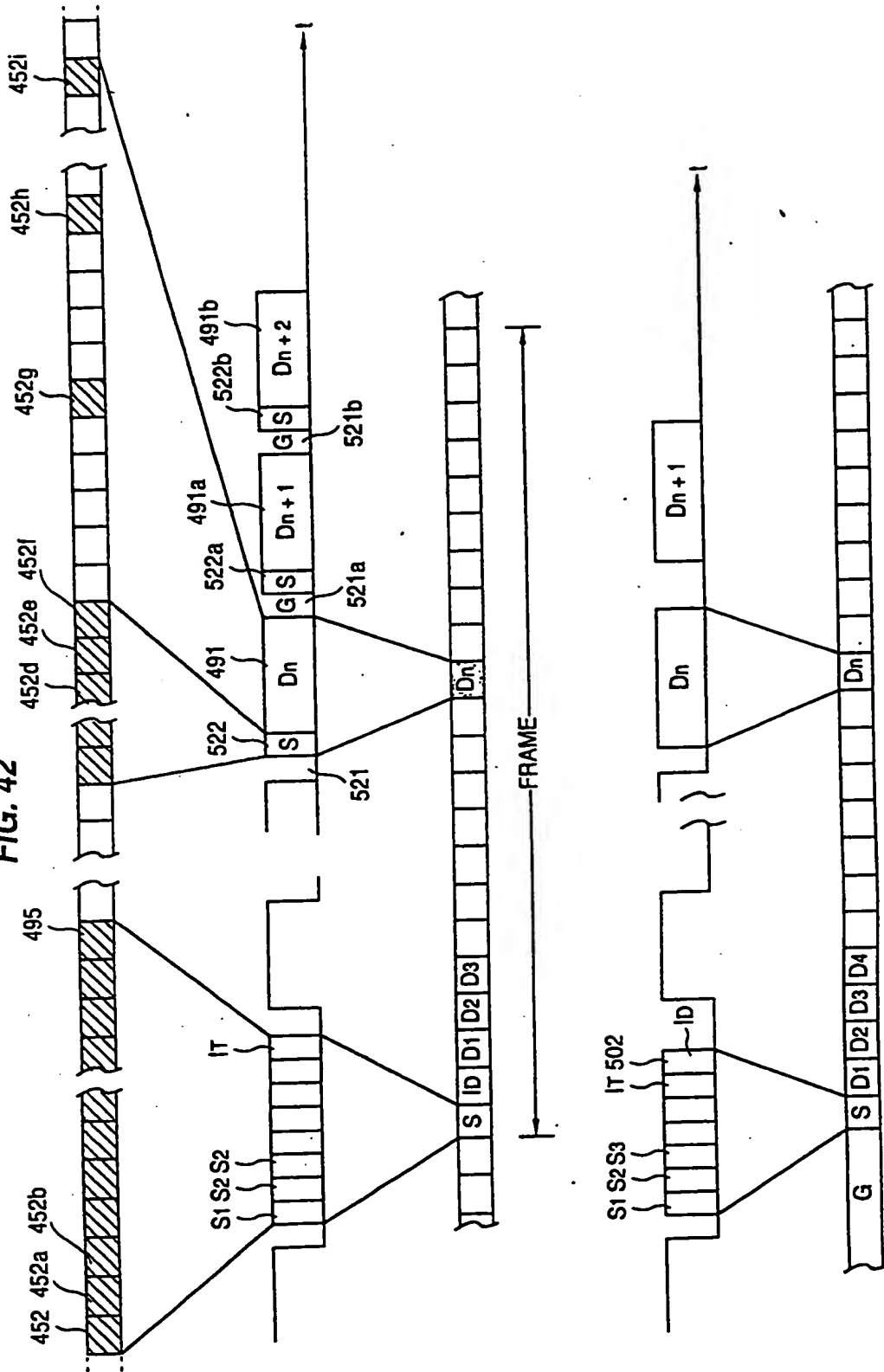
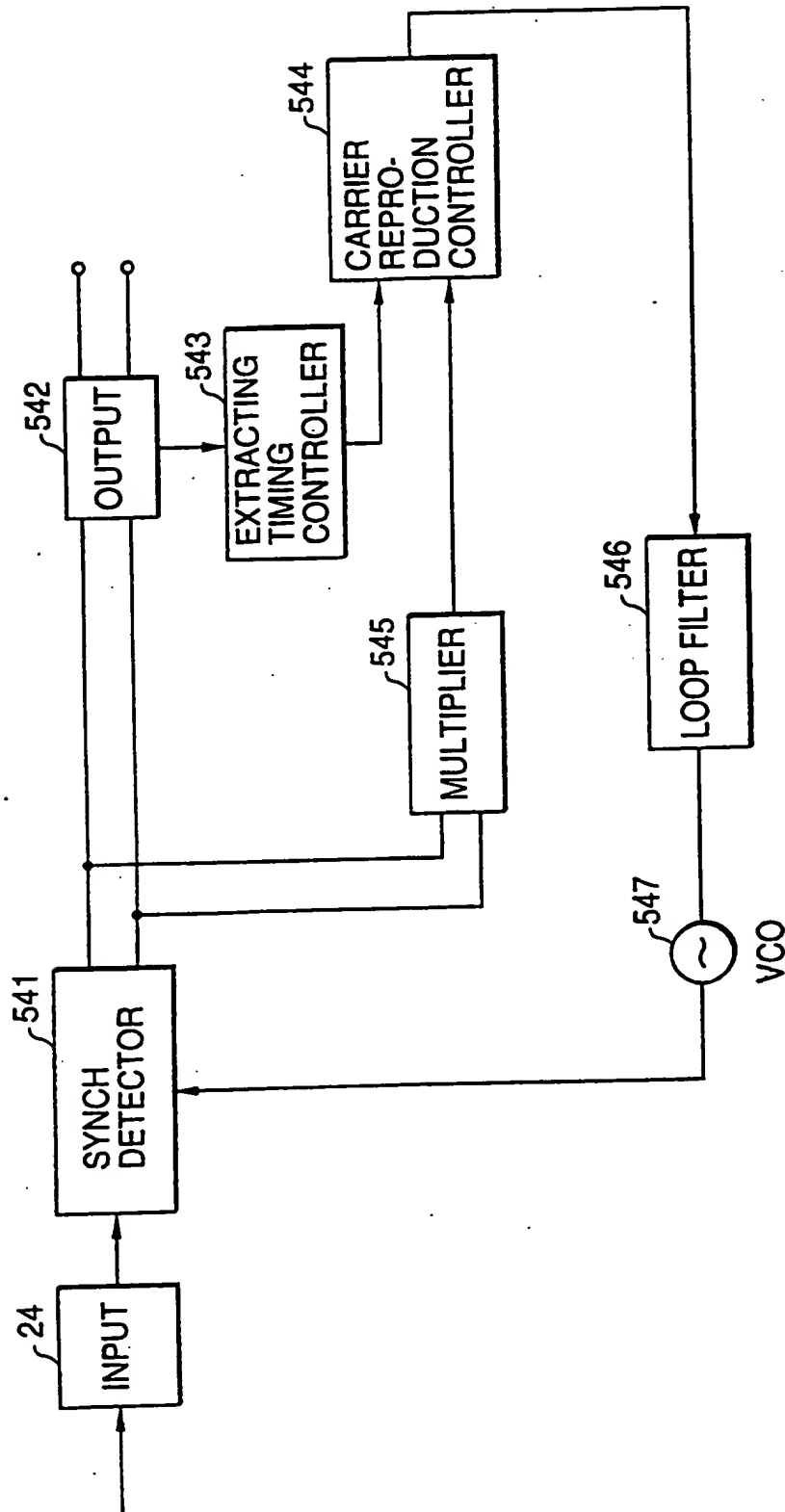




FIG. 43





U.S. Patent

Feb. 4, 1997

Sheet 44 of 178

5,600,672

FIG. 44

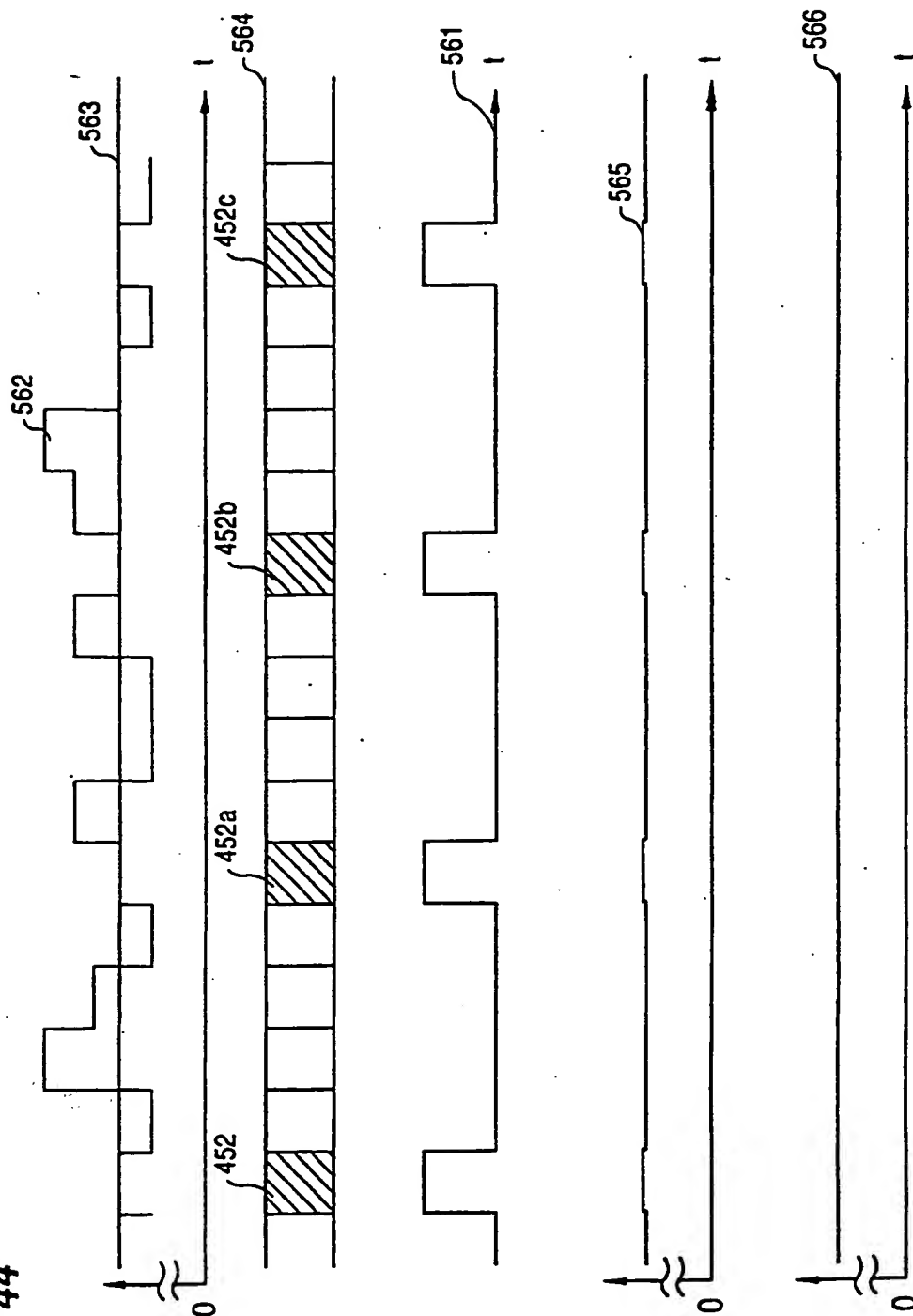




FIG. 45

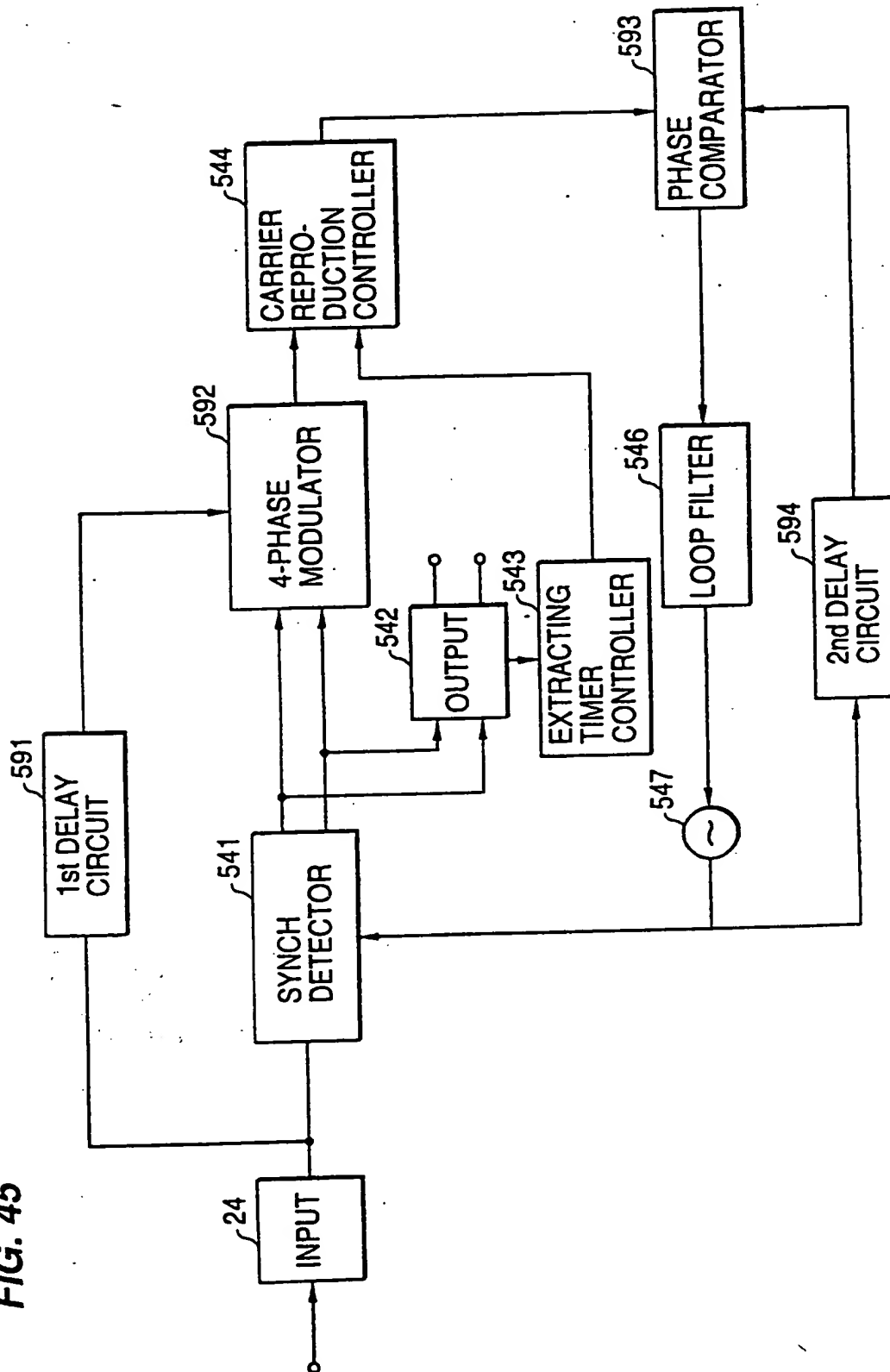




FIG. 46

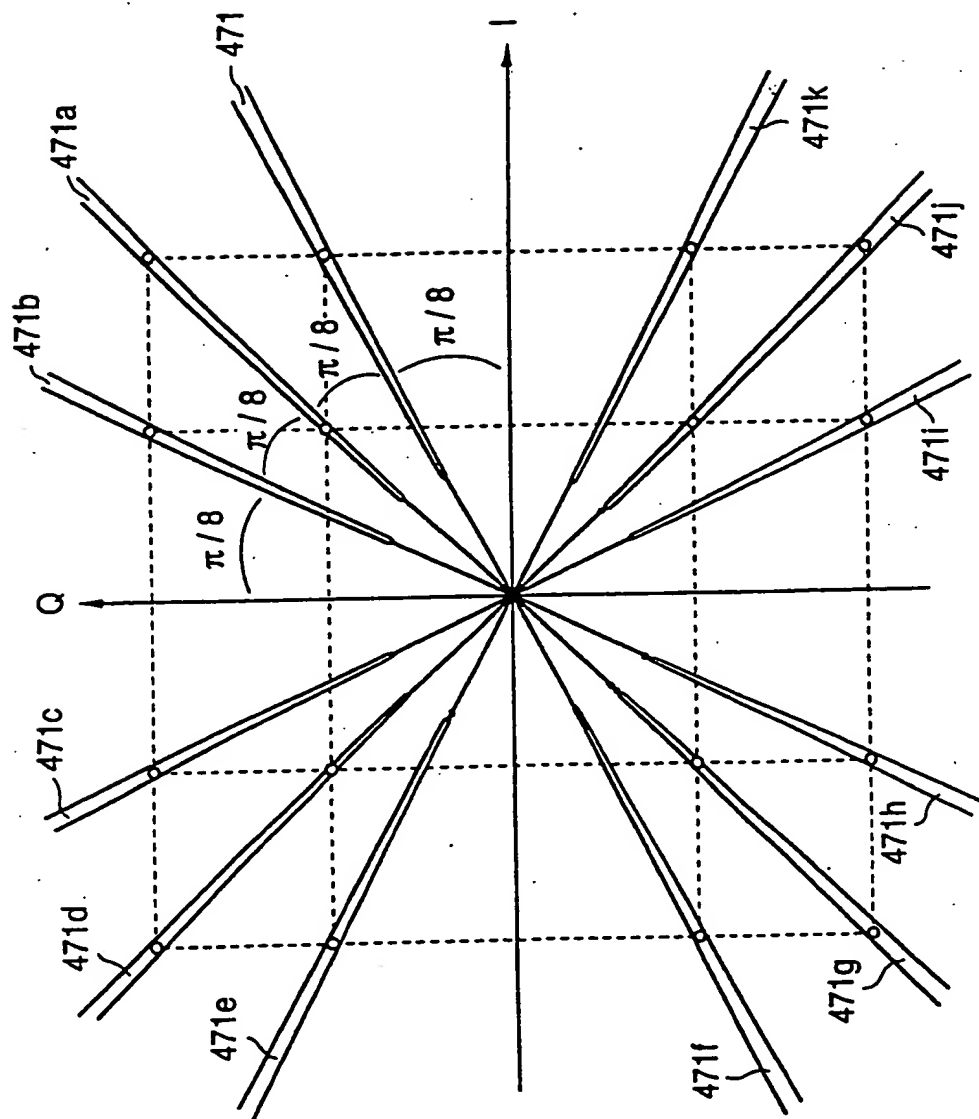




FIG. 47

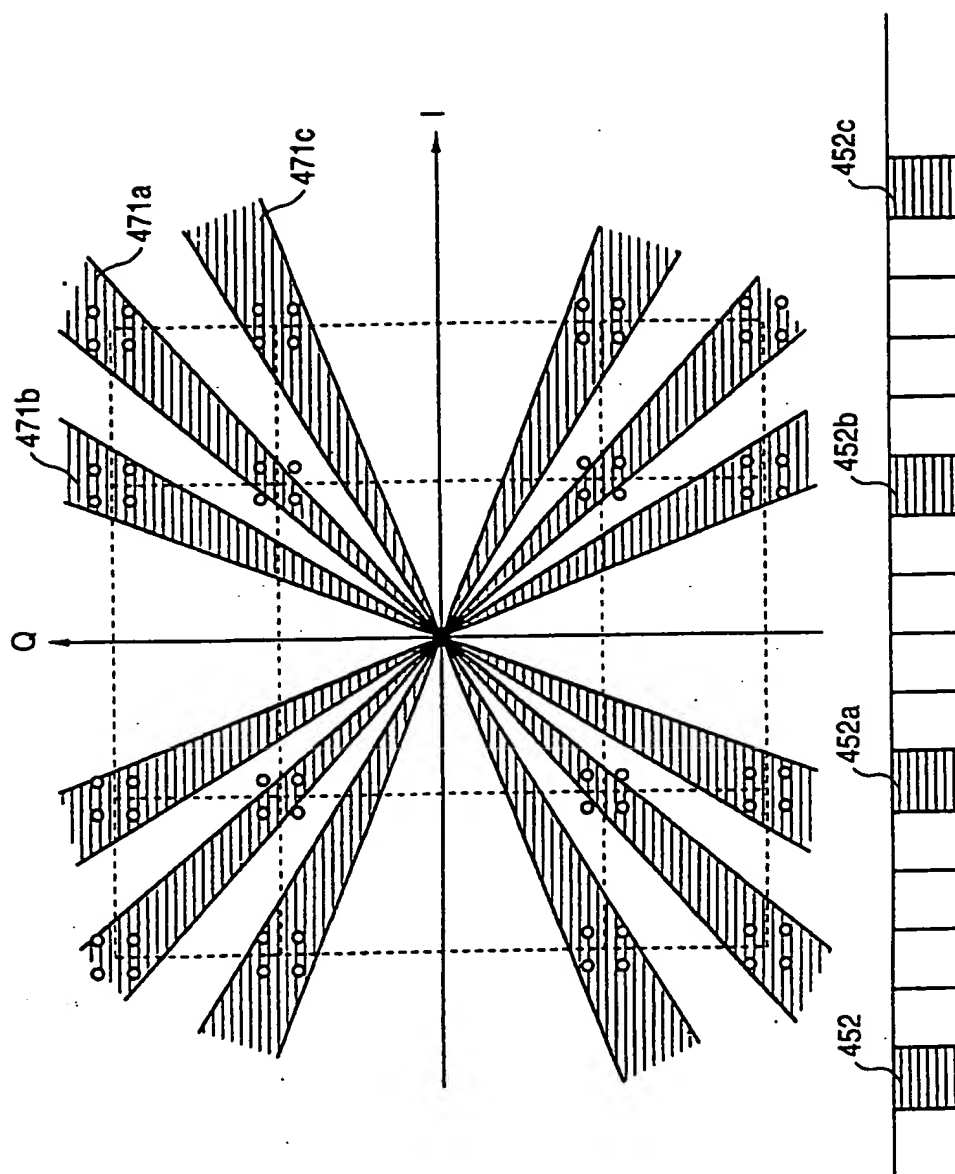




FIG. 48

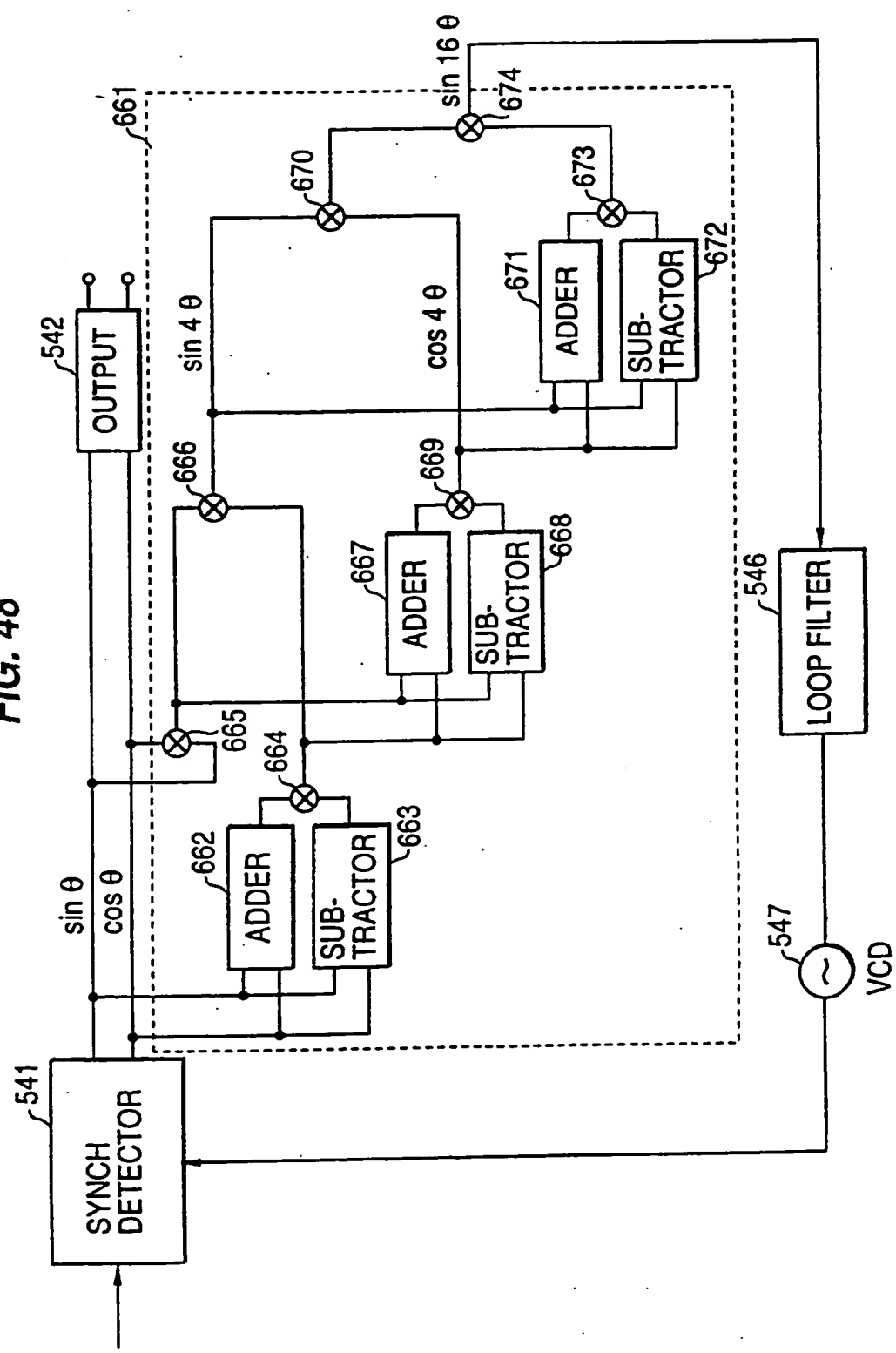
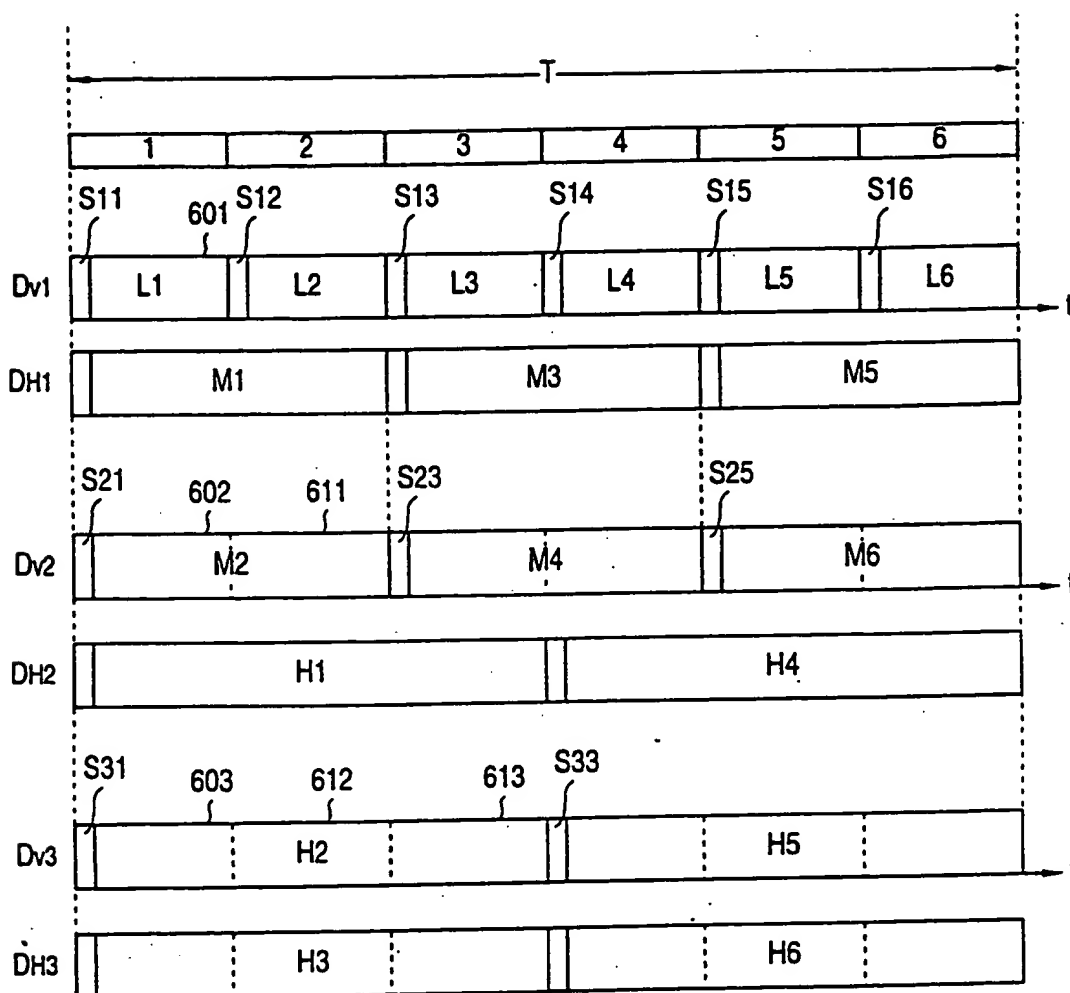




FIG. 49





Sheet 50 of 178

5,600,672

FIG. 50

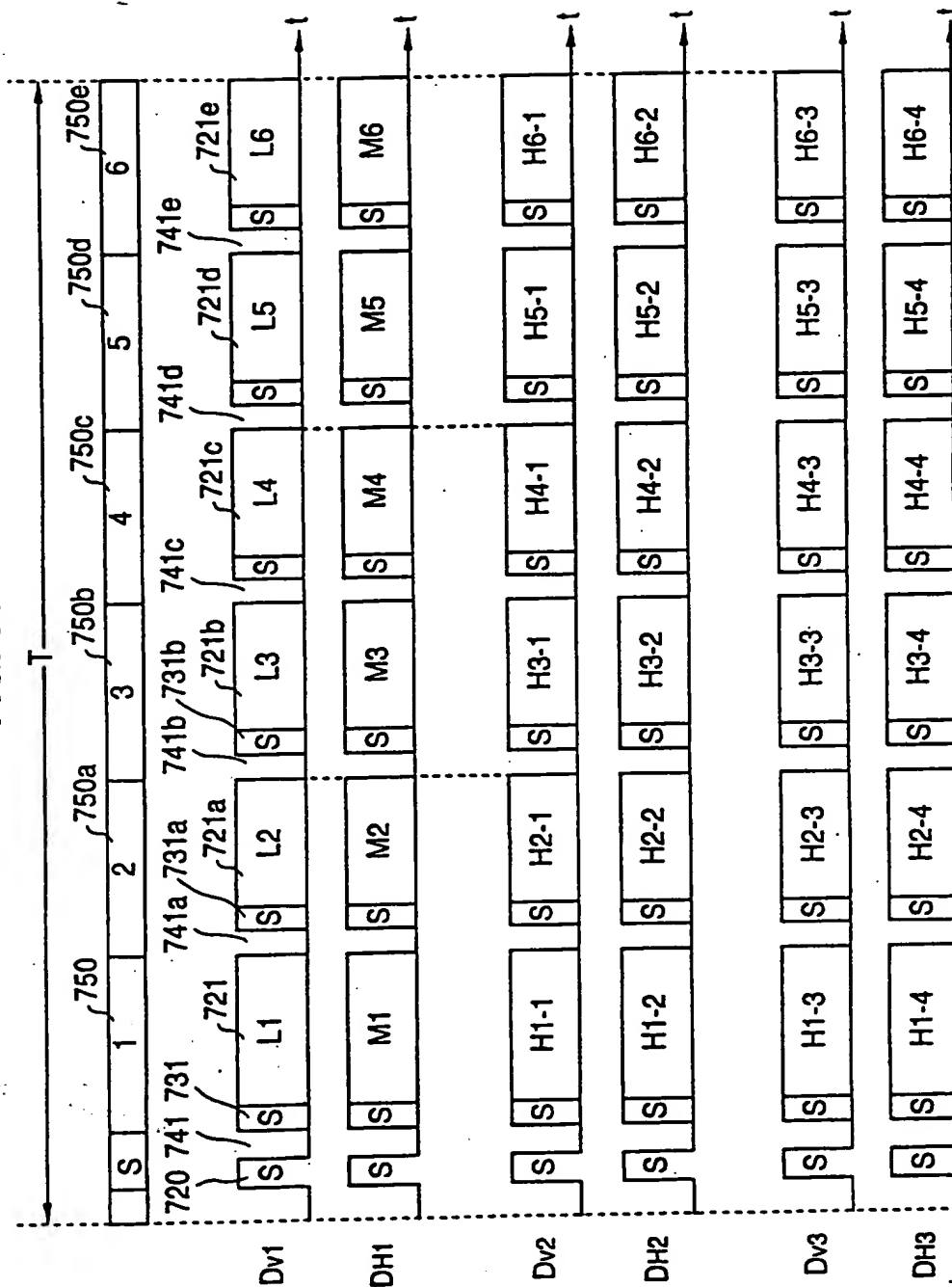
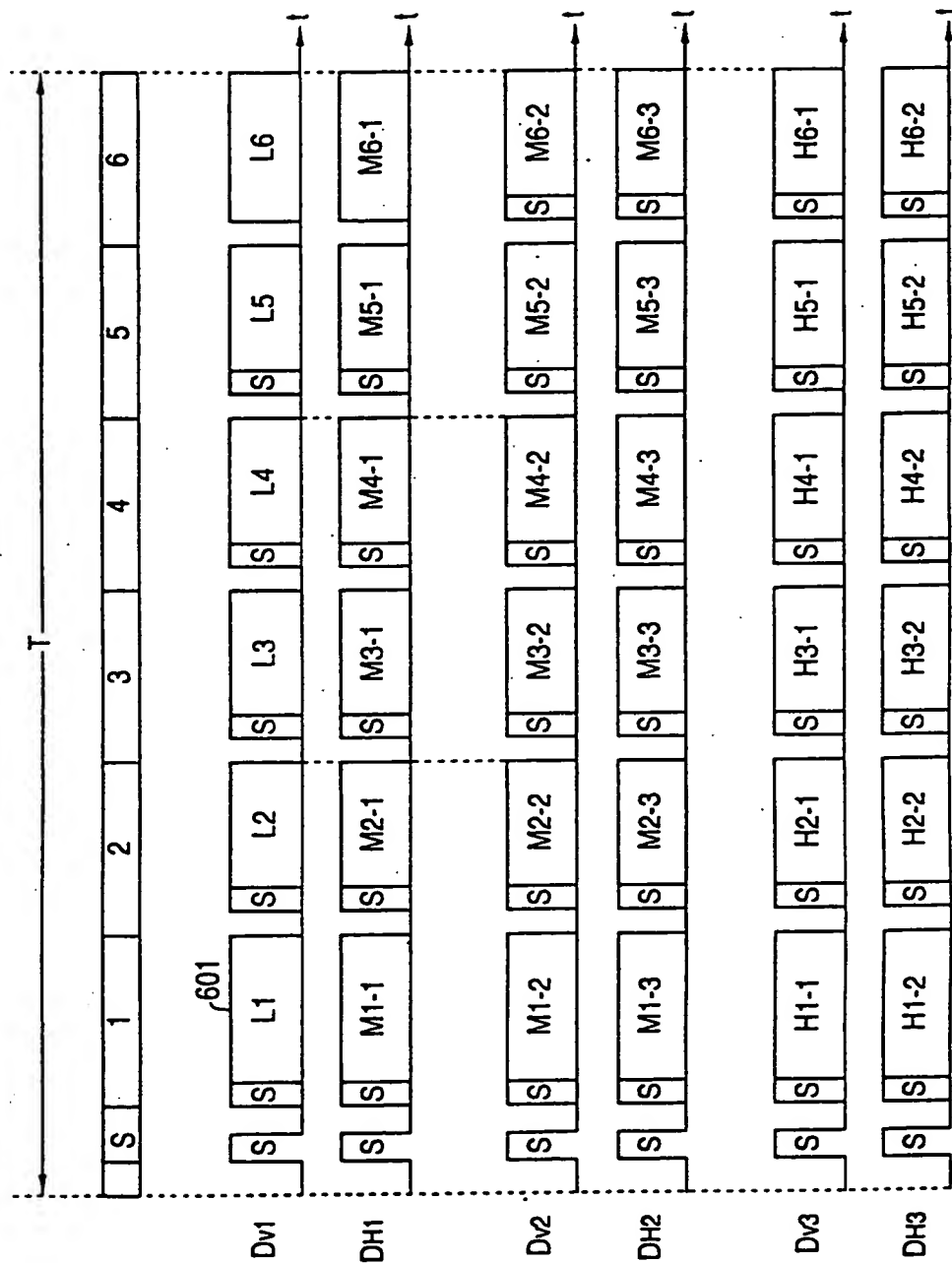




FIG. 51





U.S. Patent

Feb. 4, 1997

Sheet 52 of 178

5,600,672

FIG. 52

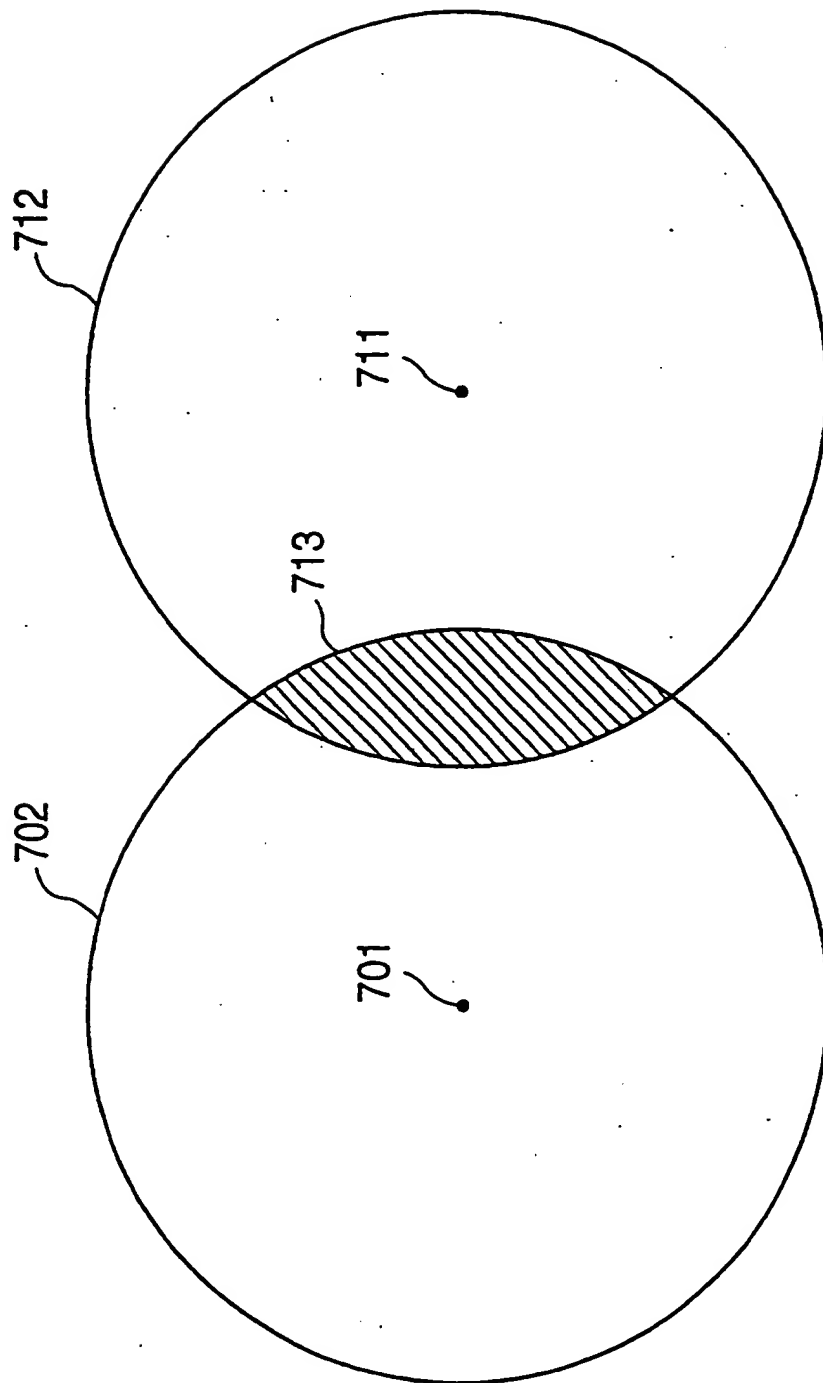




FIG. 53

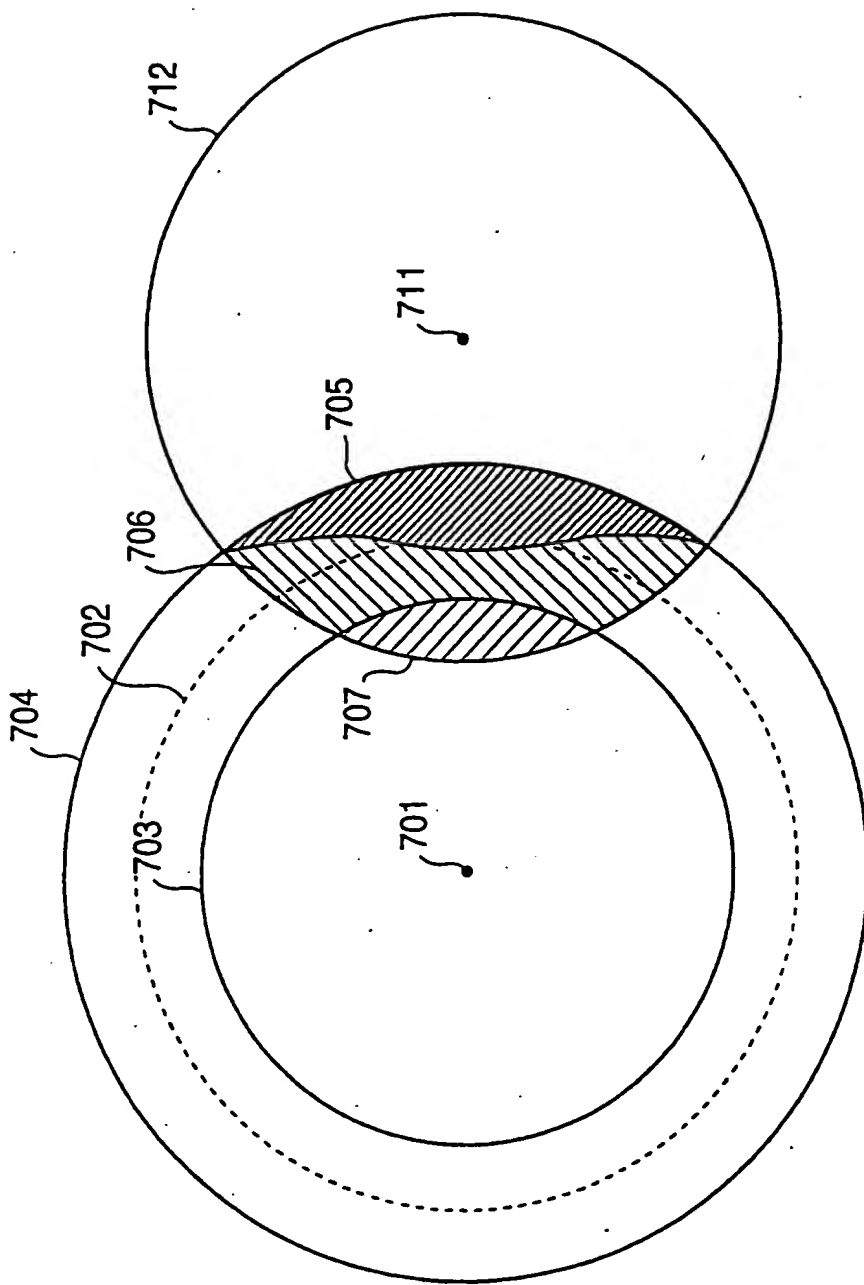




FIG. 54

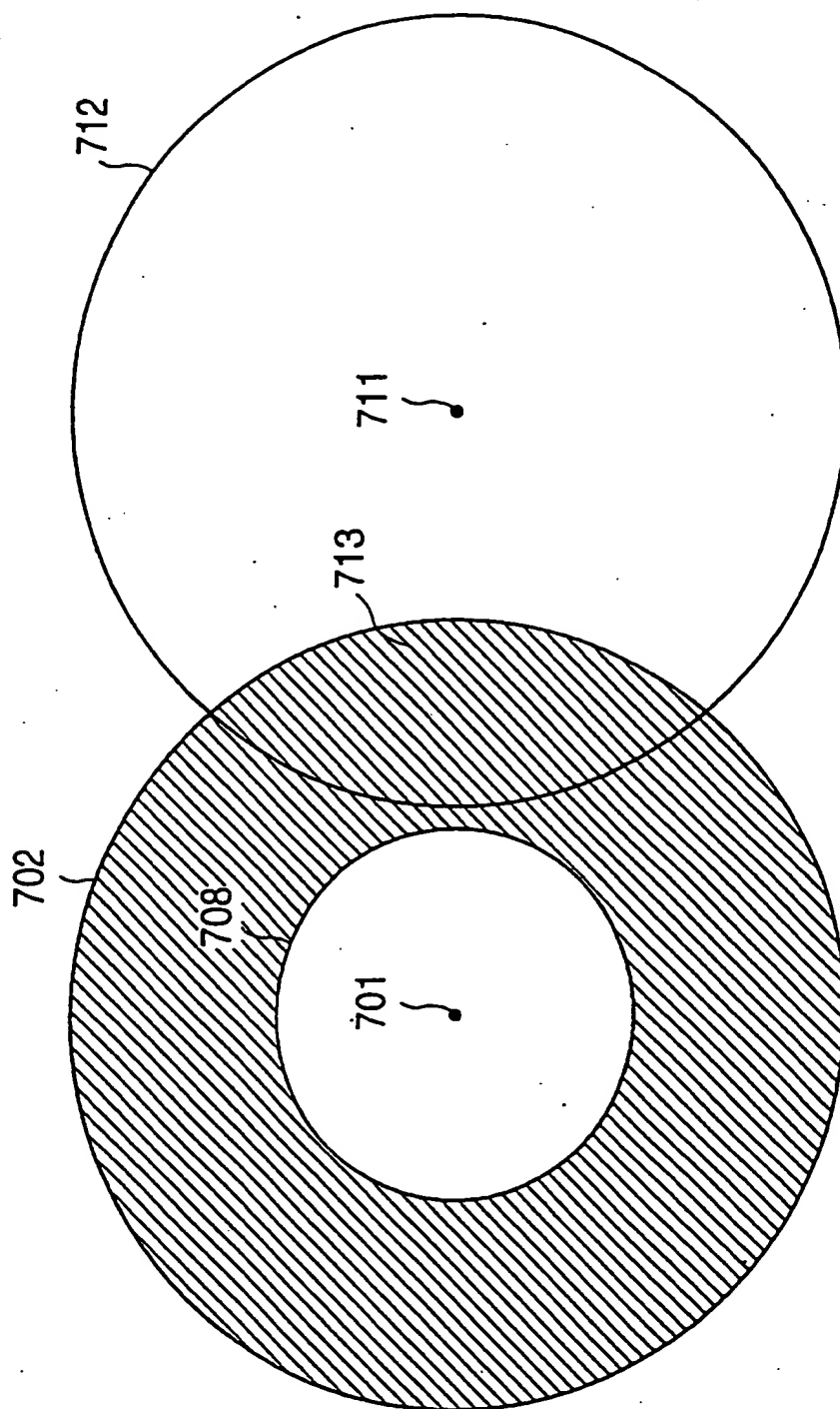




FIG. 55

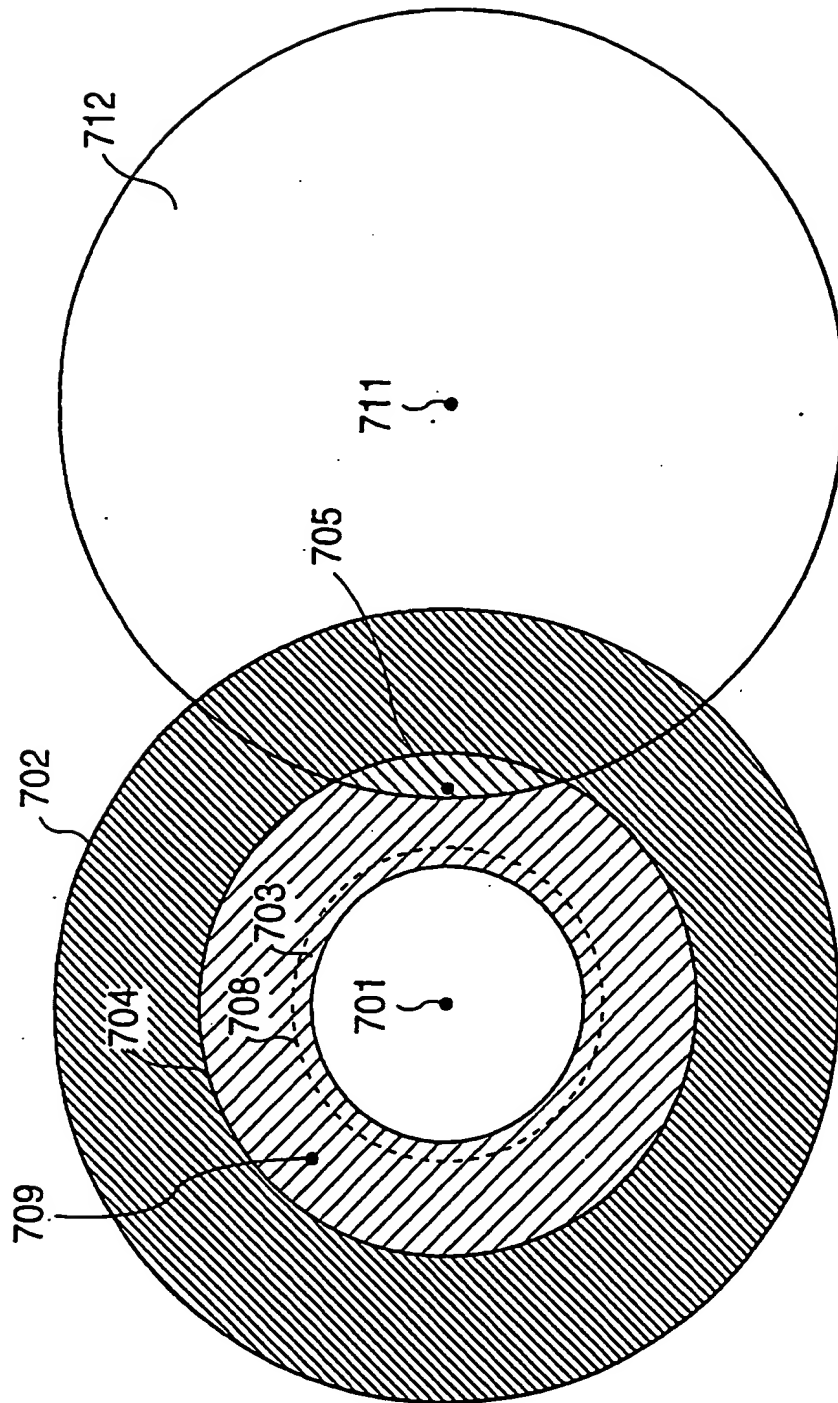




FIG. 56

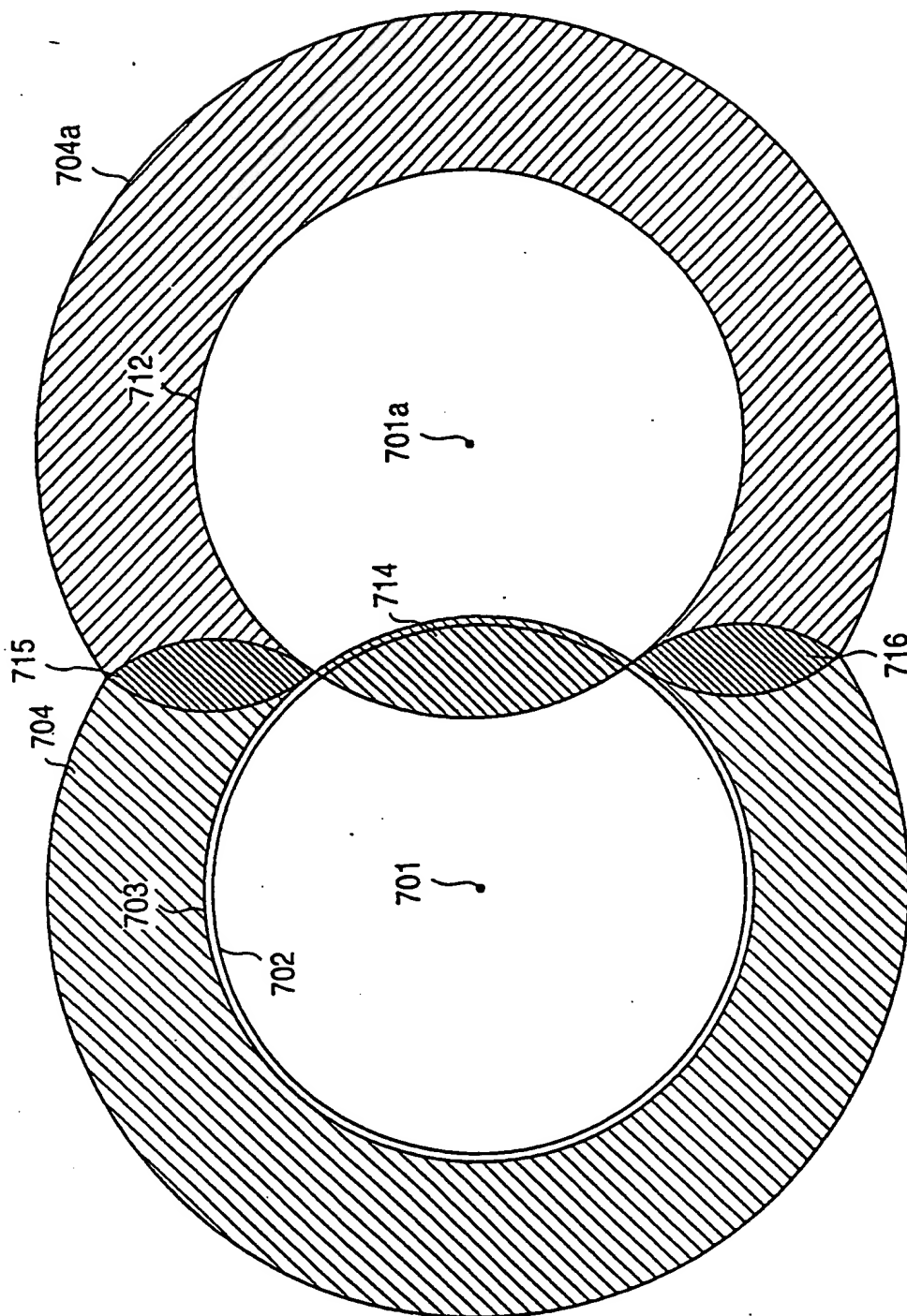




FIG. 57

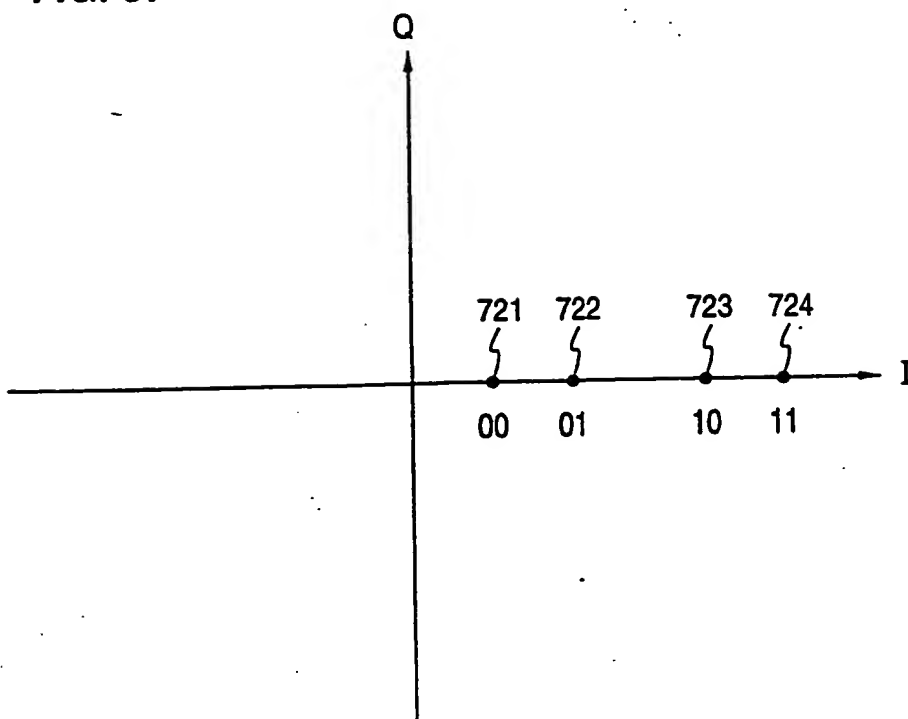


FIG. 58

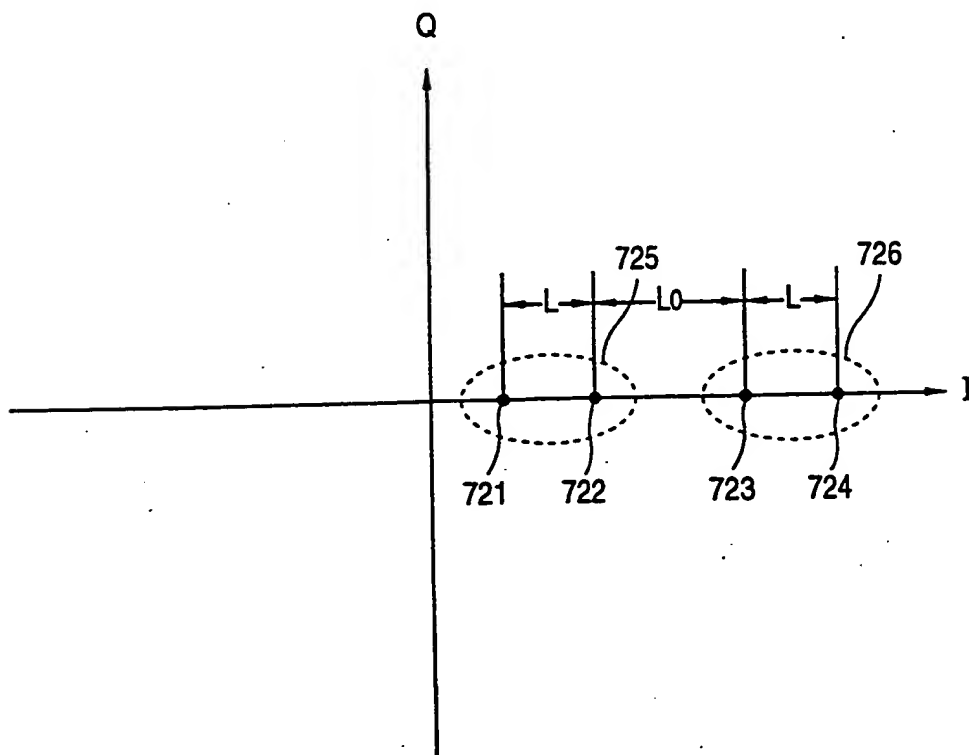


FIG. 59(a)

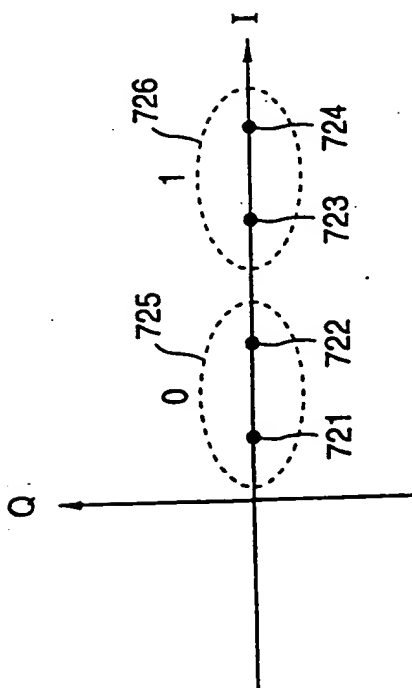


FIG. 59(c)

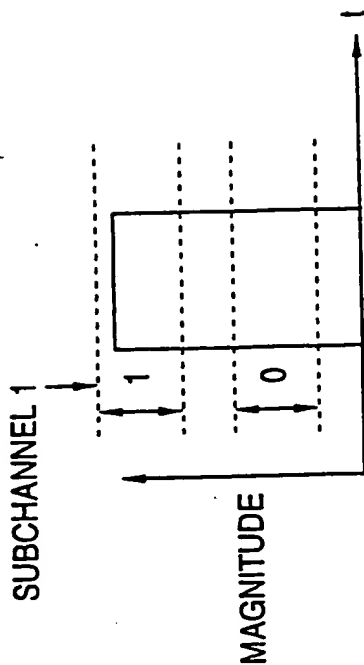


FIG. 59(b)

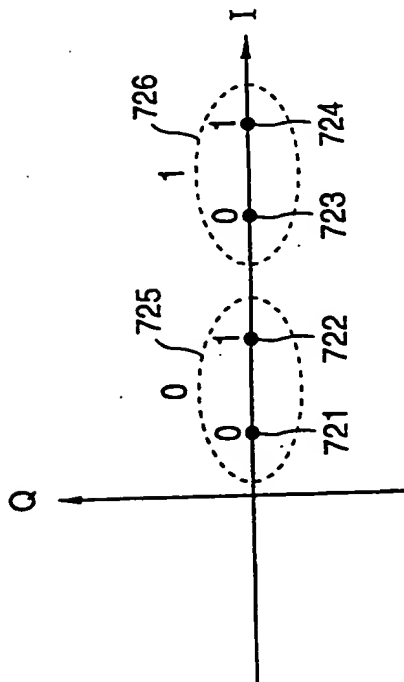
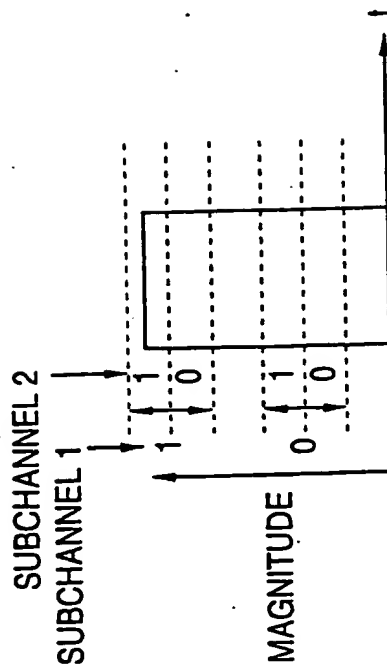


FIG. 59(d)





U.S. Patent

Feb. 4, 1997

Sheet 59 of 178

5,600,672

FIG. 60

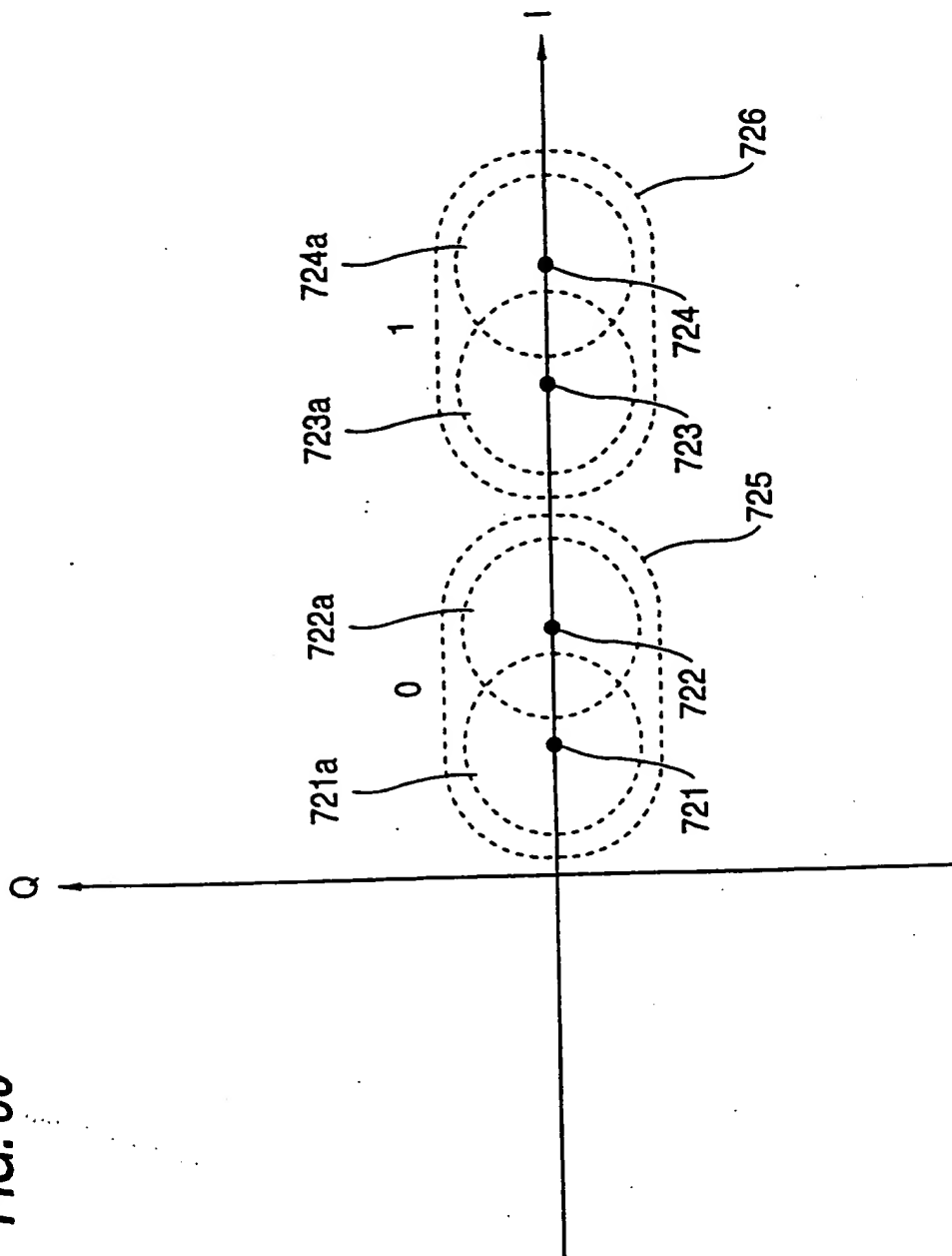




FIG. 61

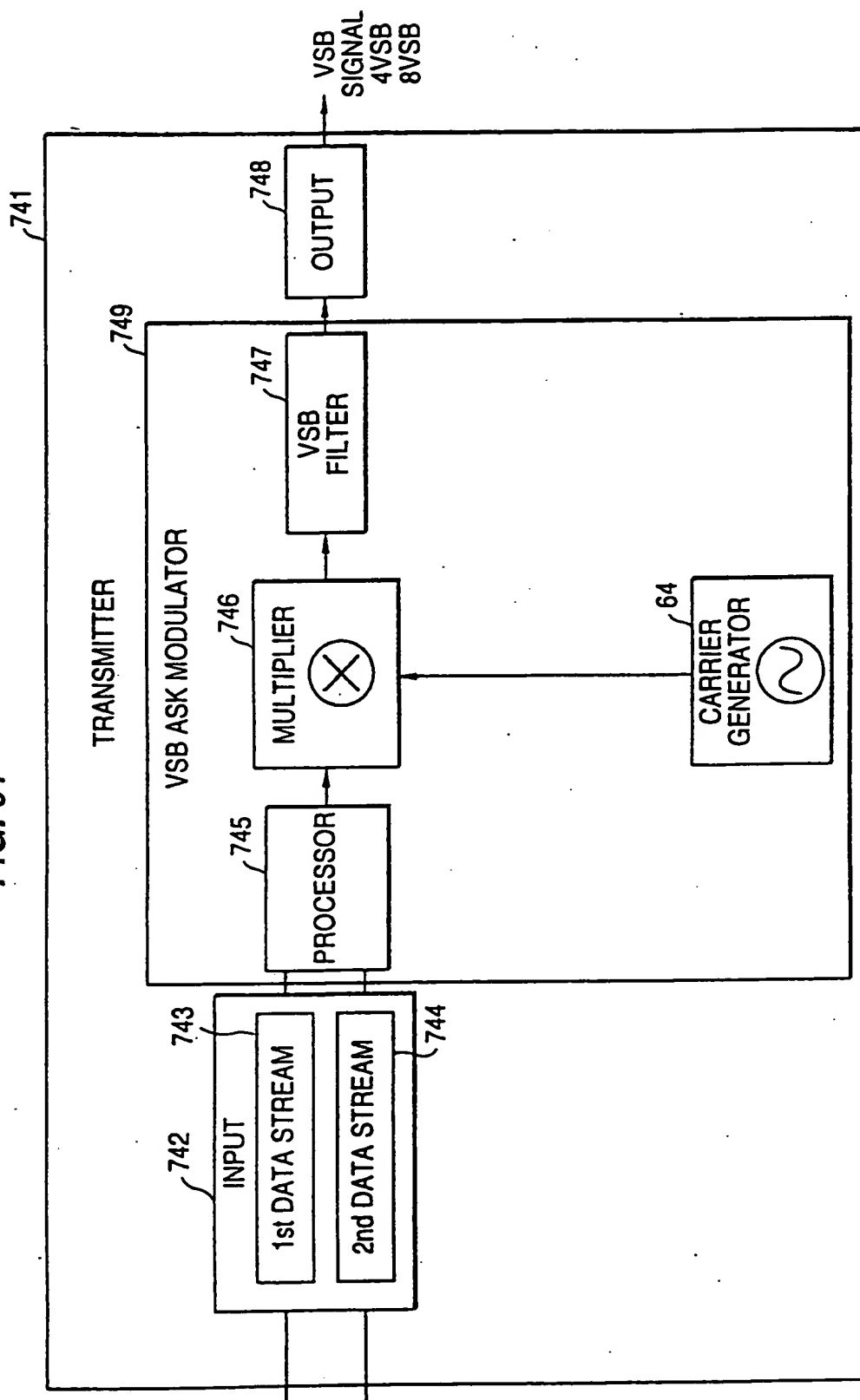




FIG. 62(a)

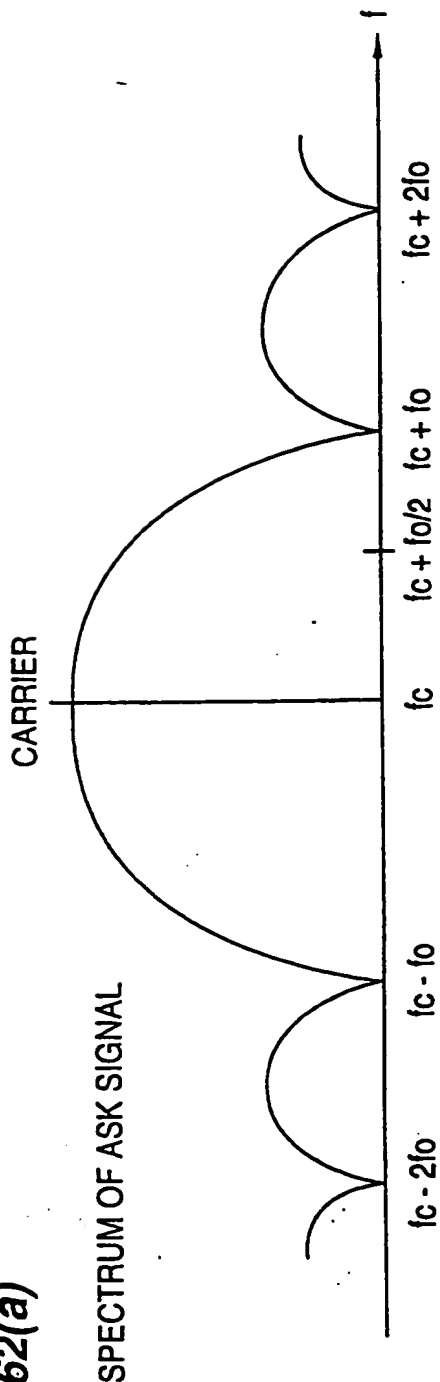


FIG. 62(b)

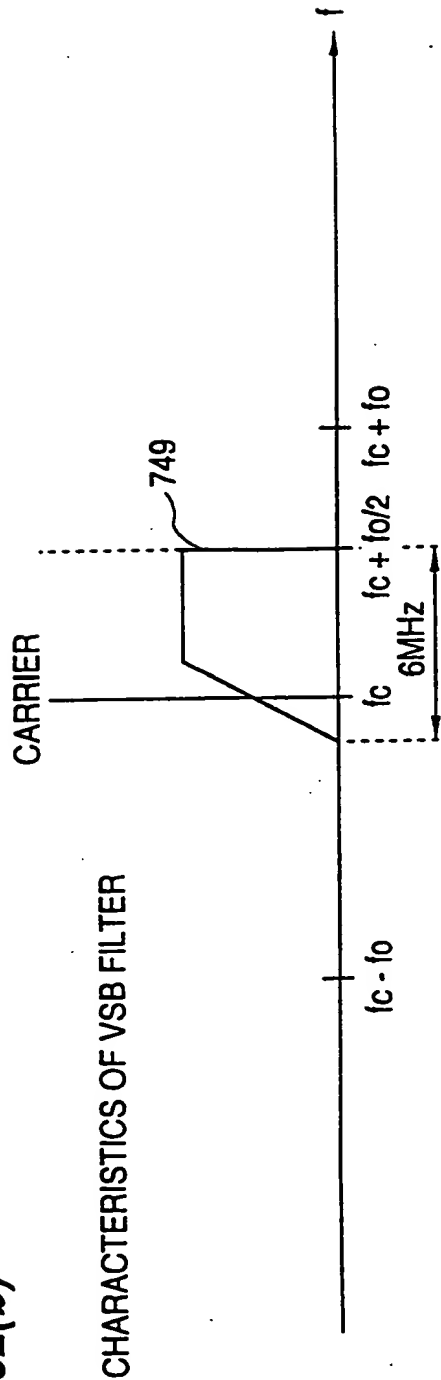




FIG. 63

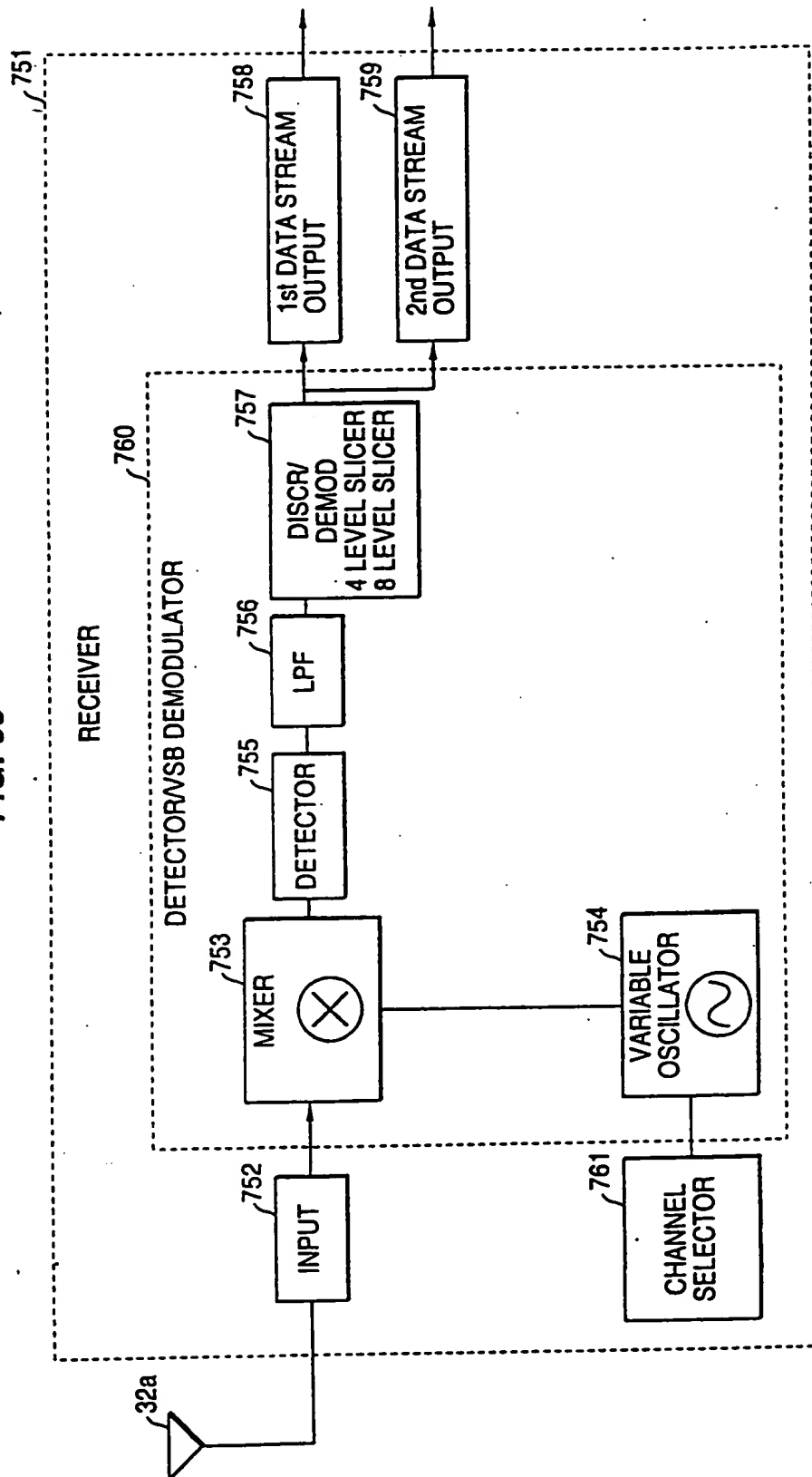




FIG. 64

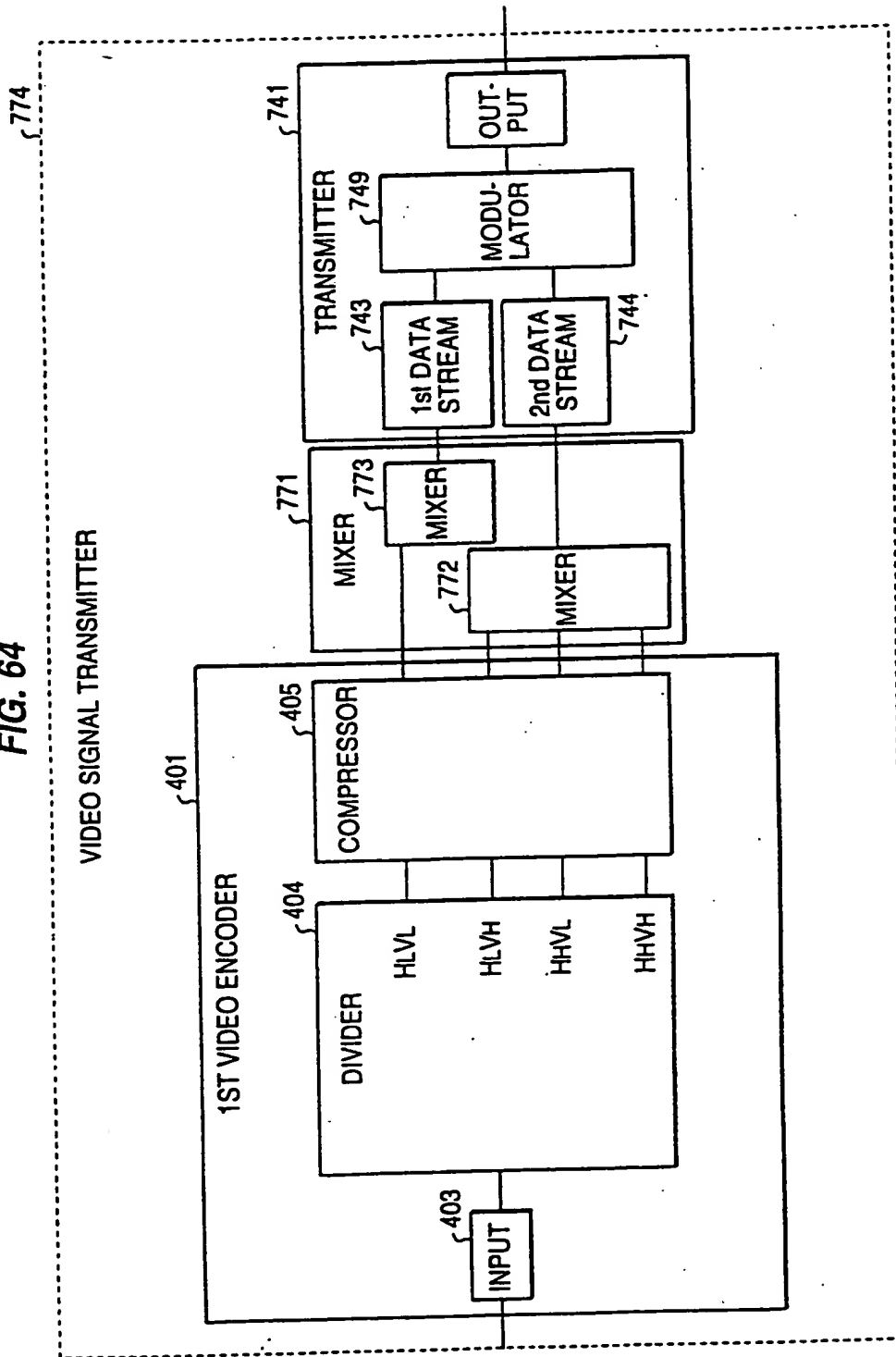
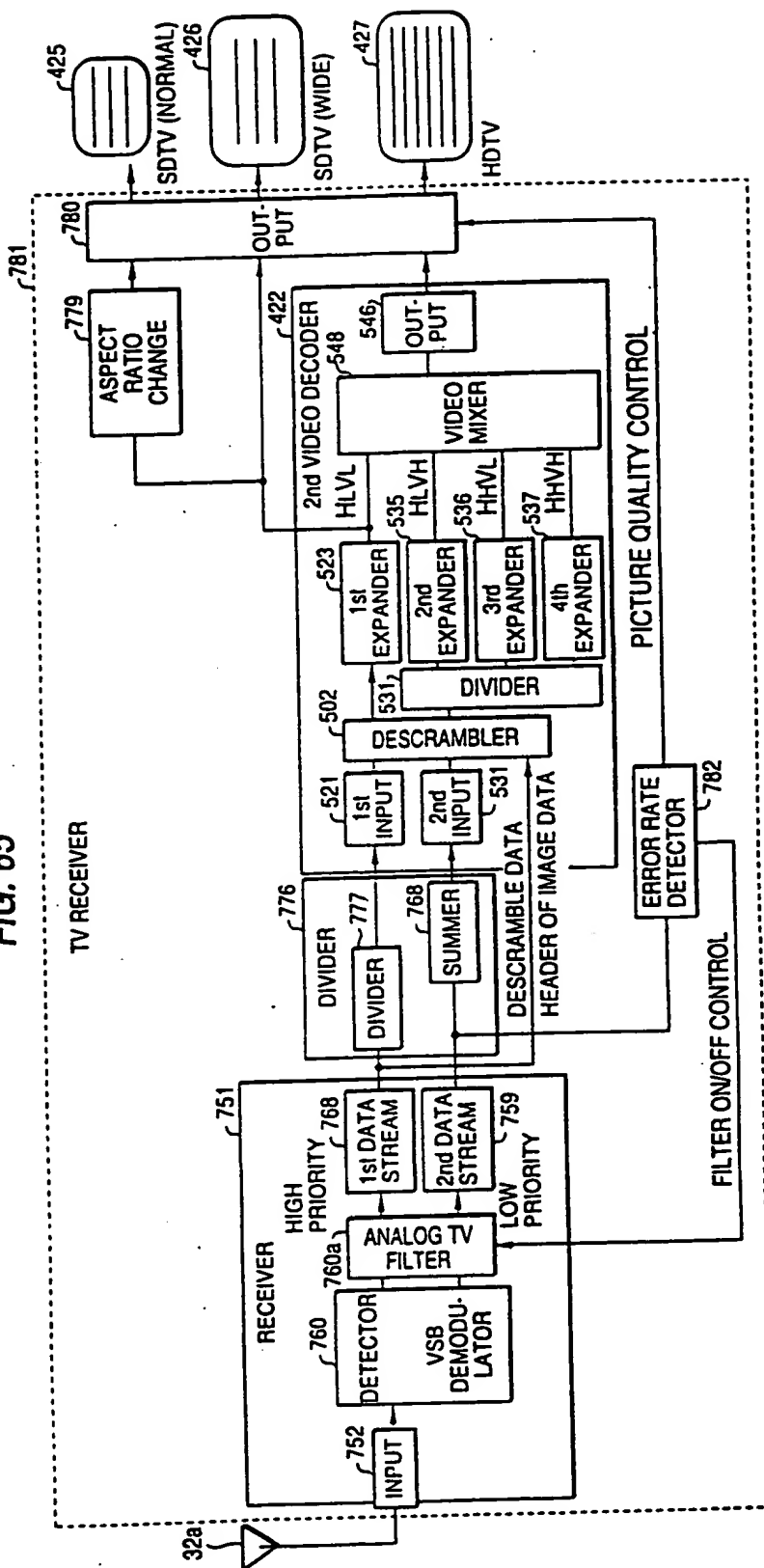




FIG. 65





U.S. Patent

Feb. 4, 1997

Sheet 65 of 178

5,600,672

FIG. 66

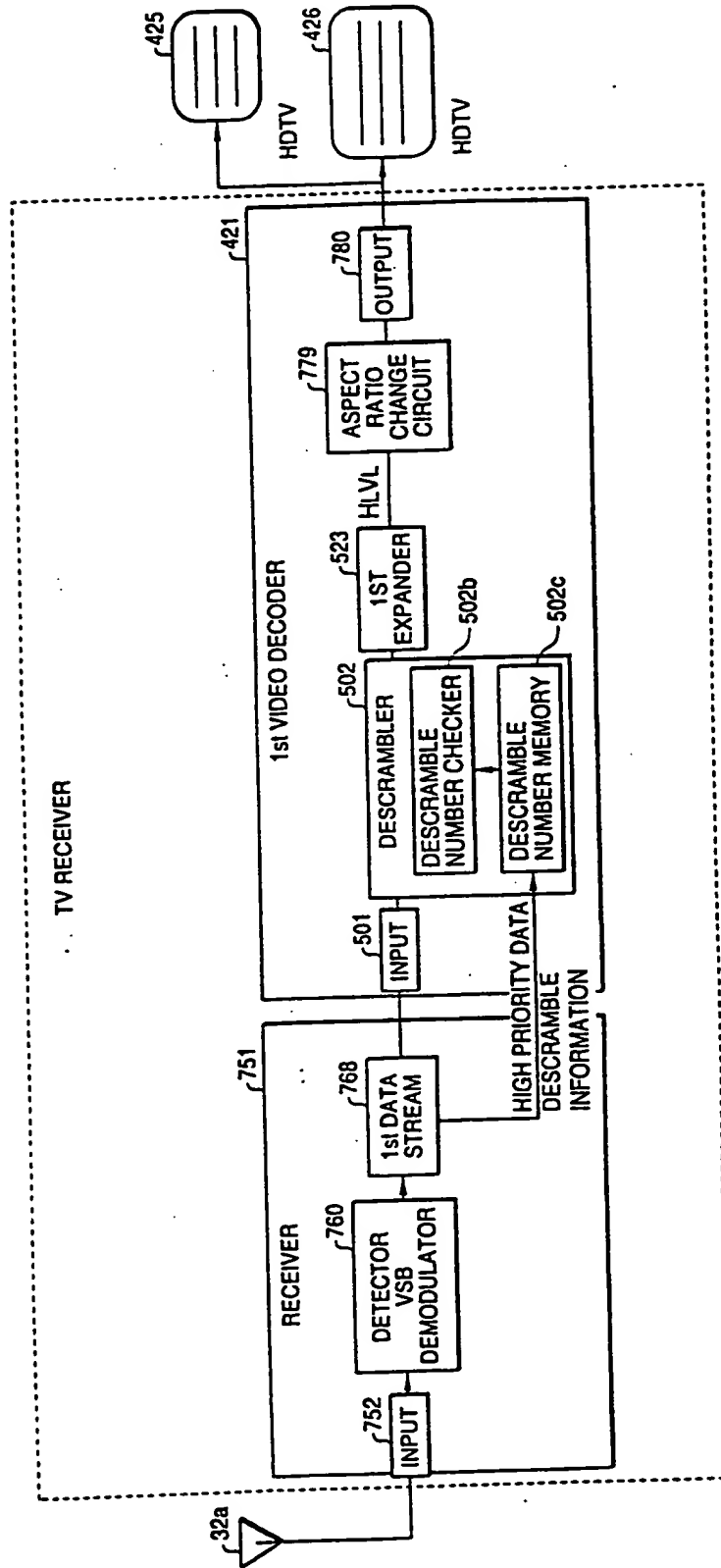




FIG. 67

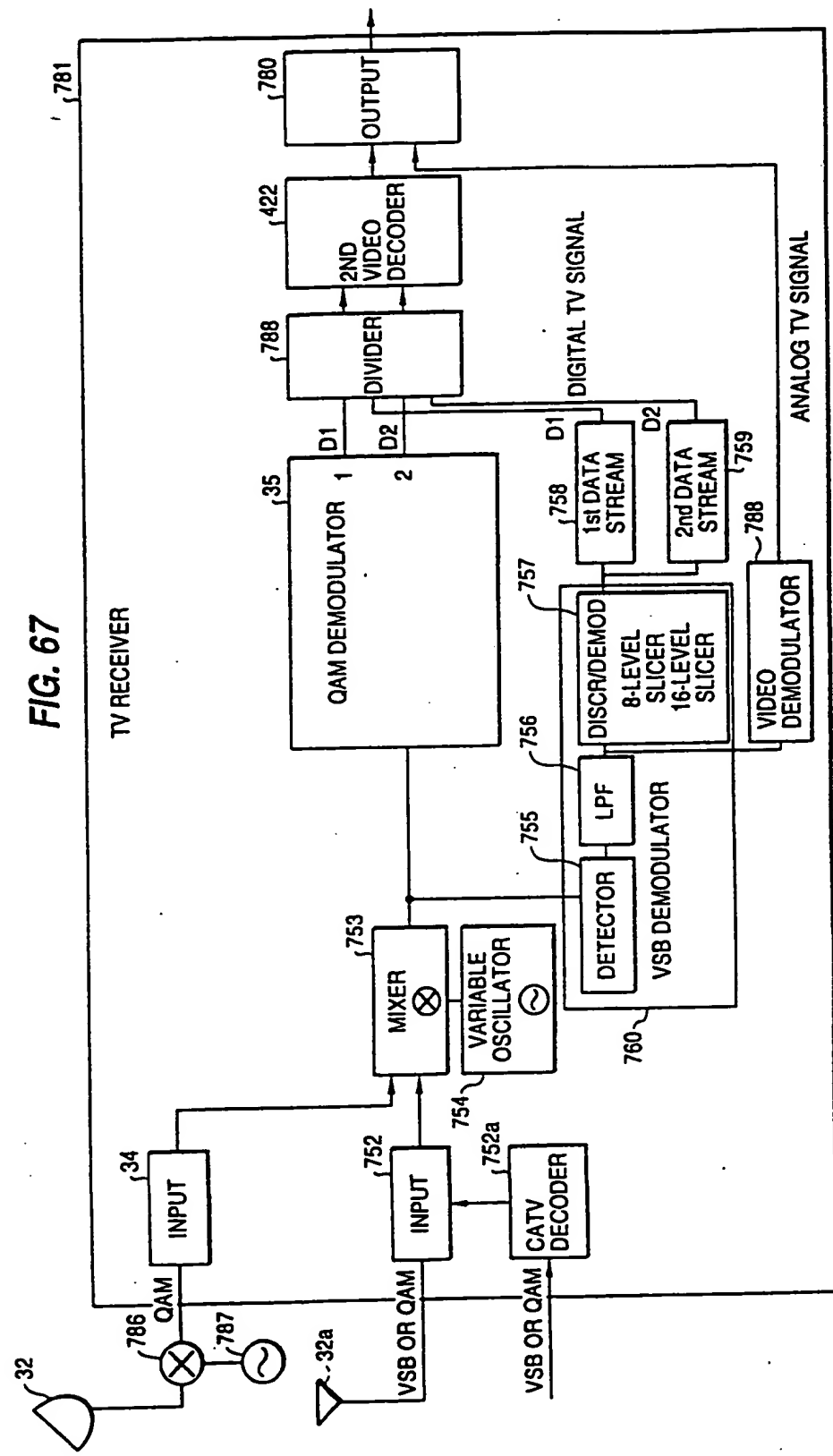




FIG. 68(a)

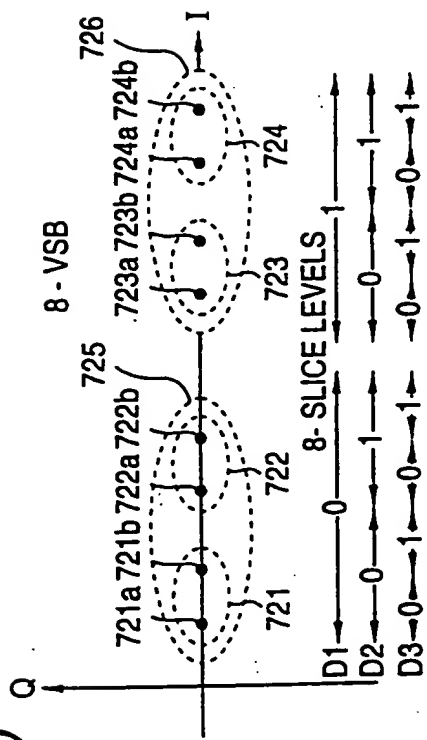


FIG. 68(b)

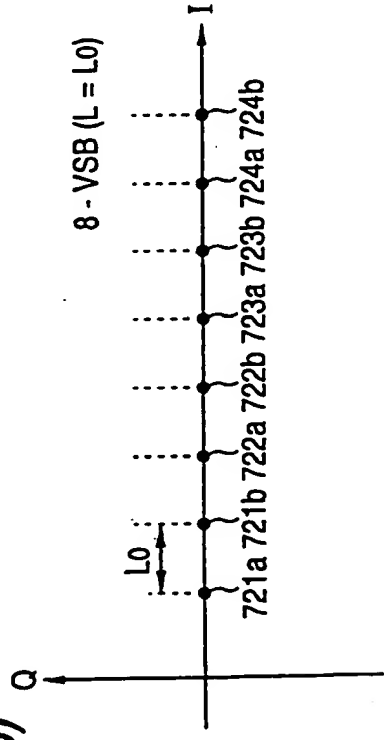
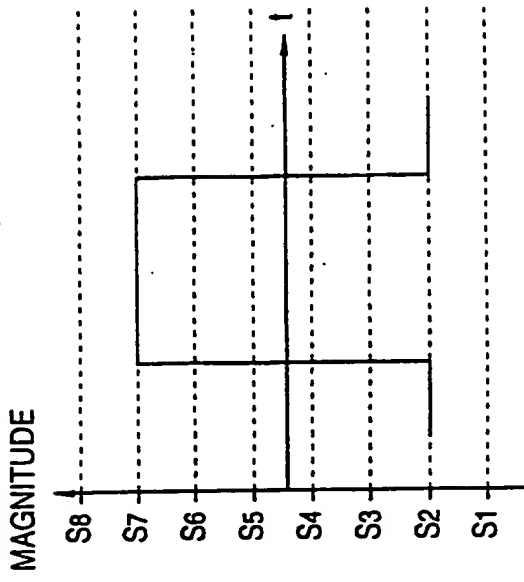


FIG. 68(c)





Sheet 68 of 178

5,600,672

FIG. 69

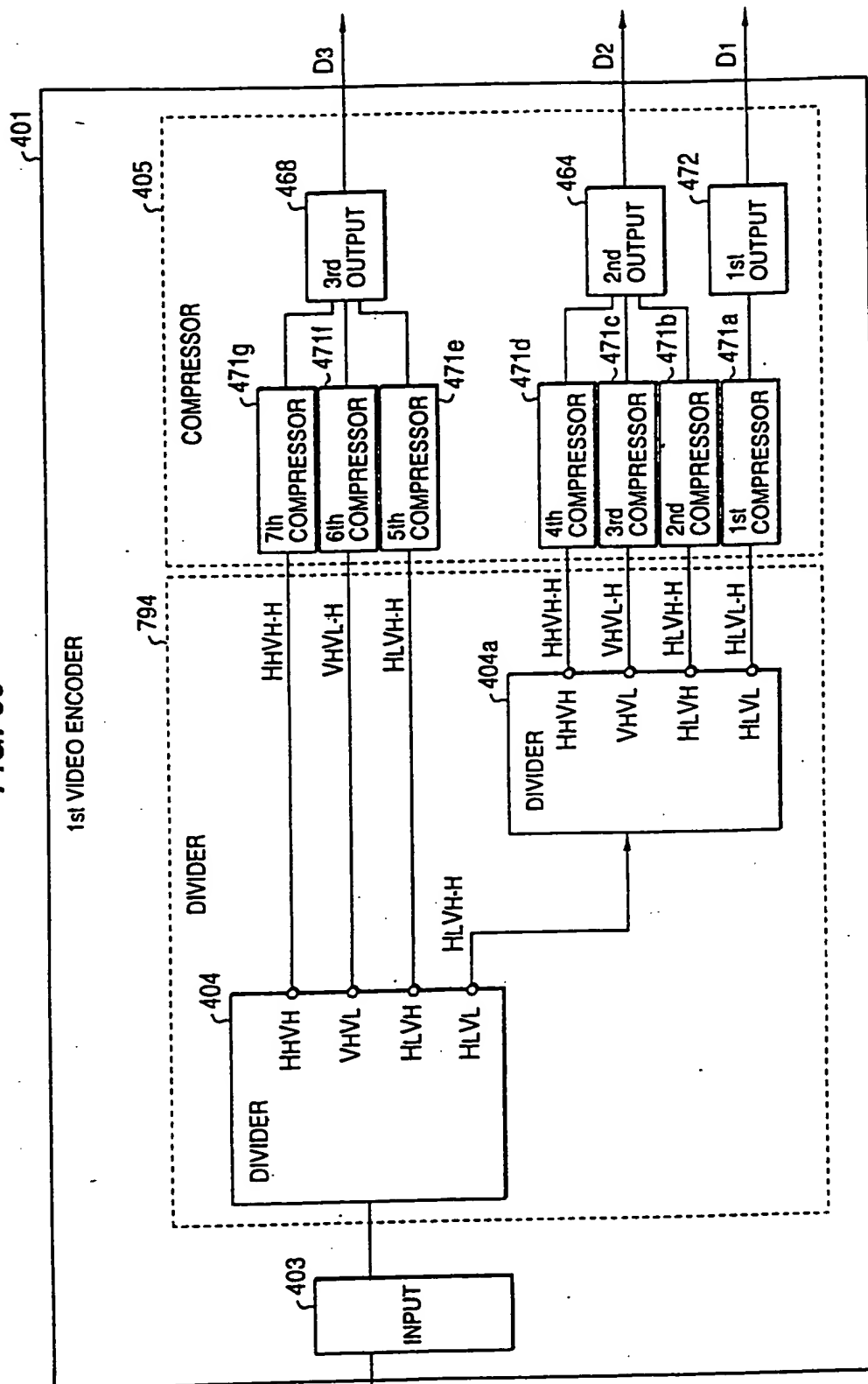




FIG. 70

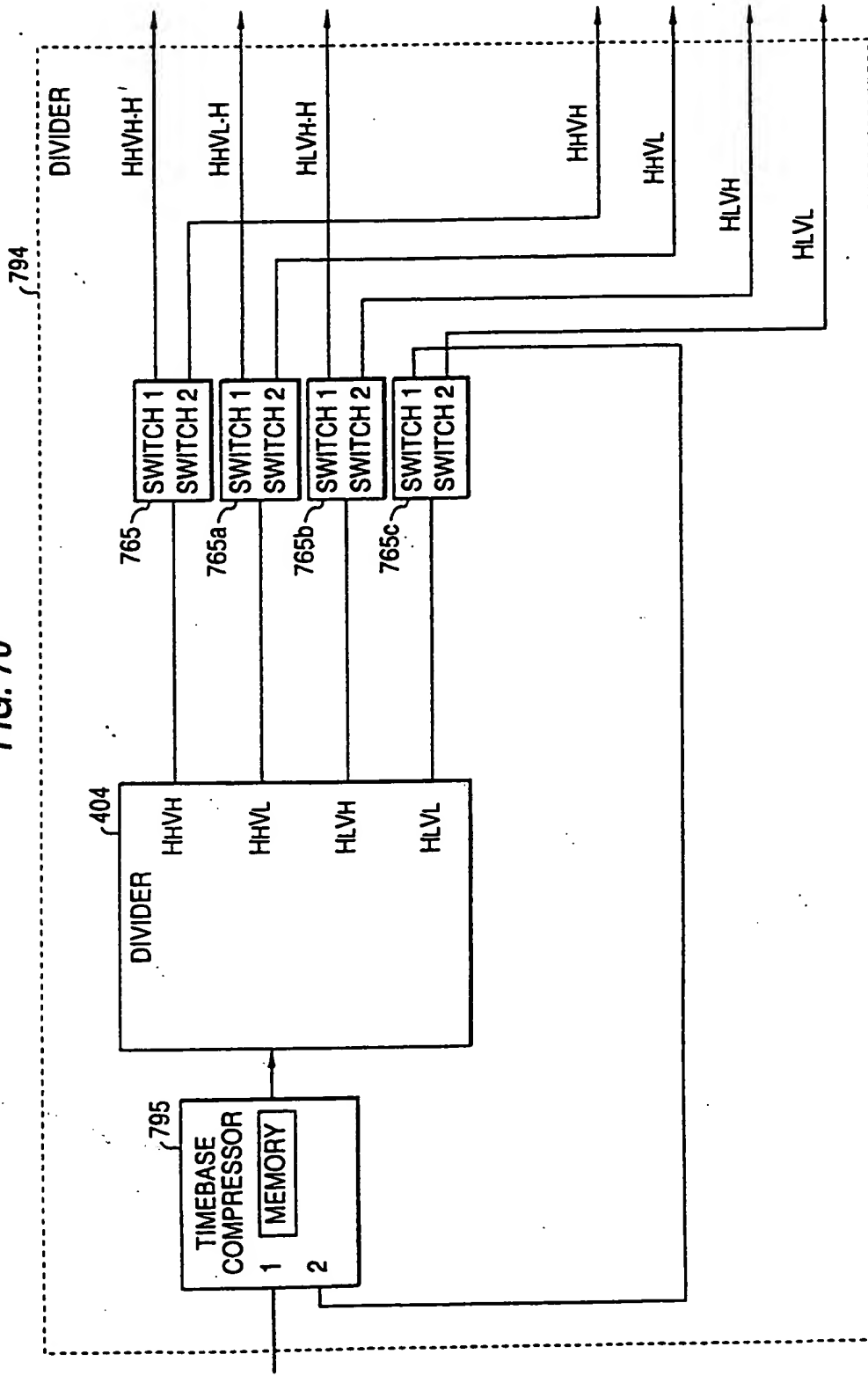




FIG. 71

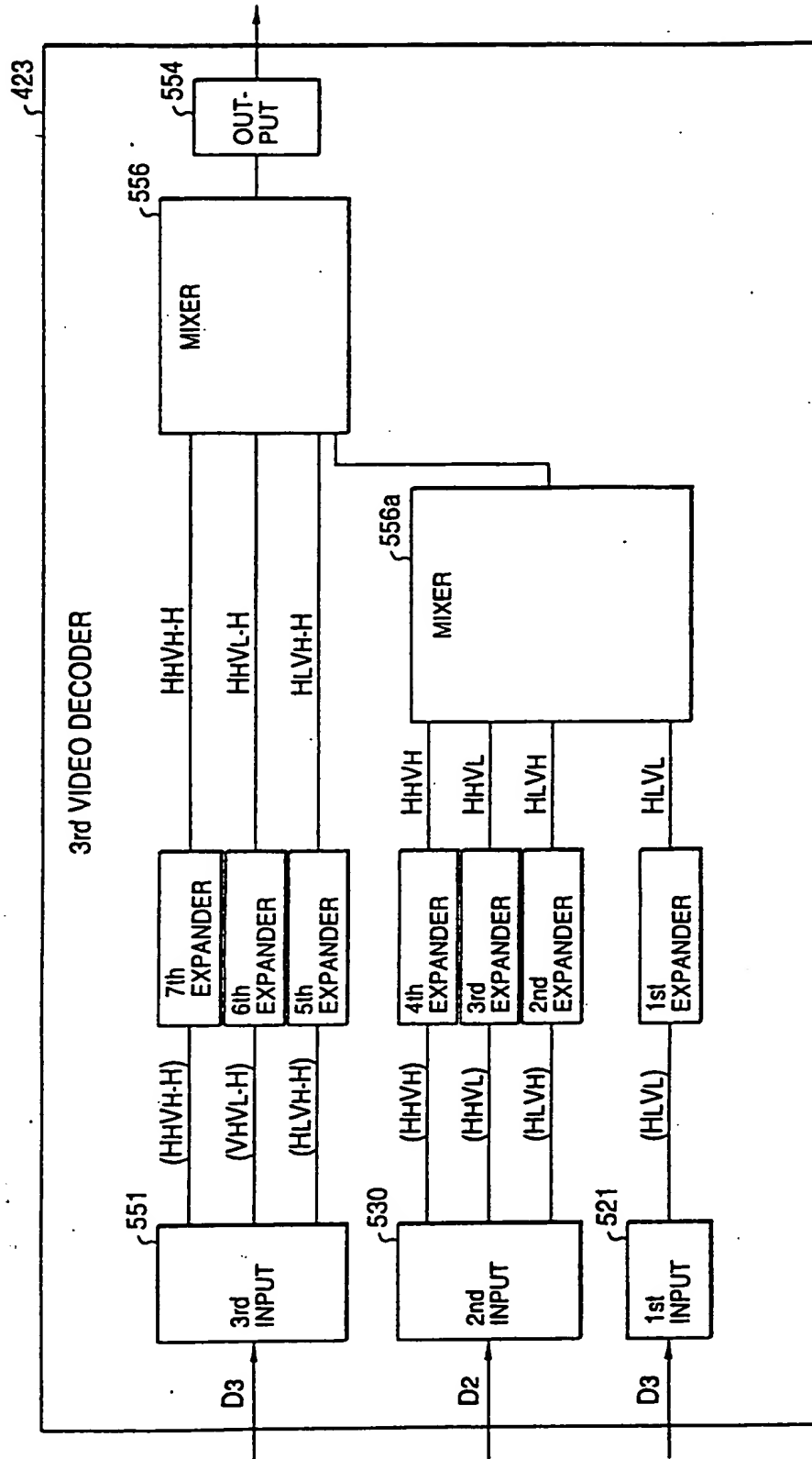




FIG. 72

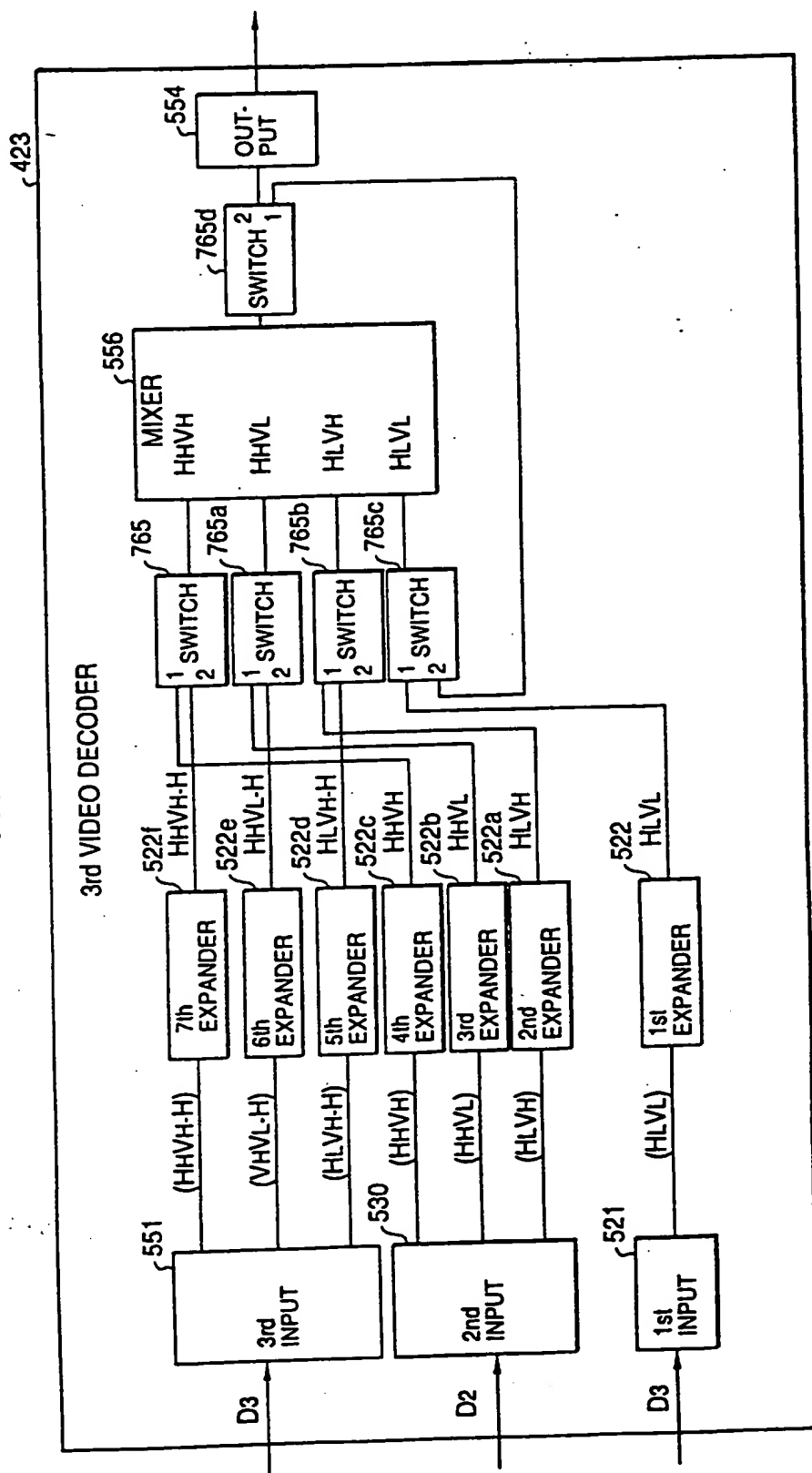




FIG. 73

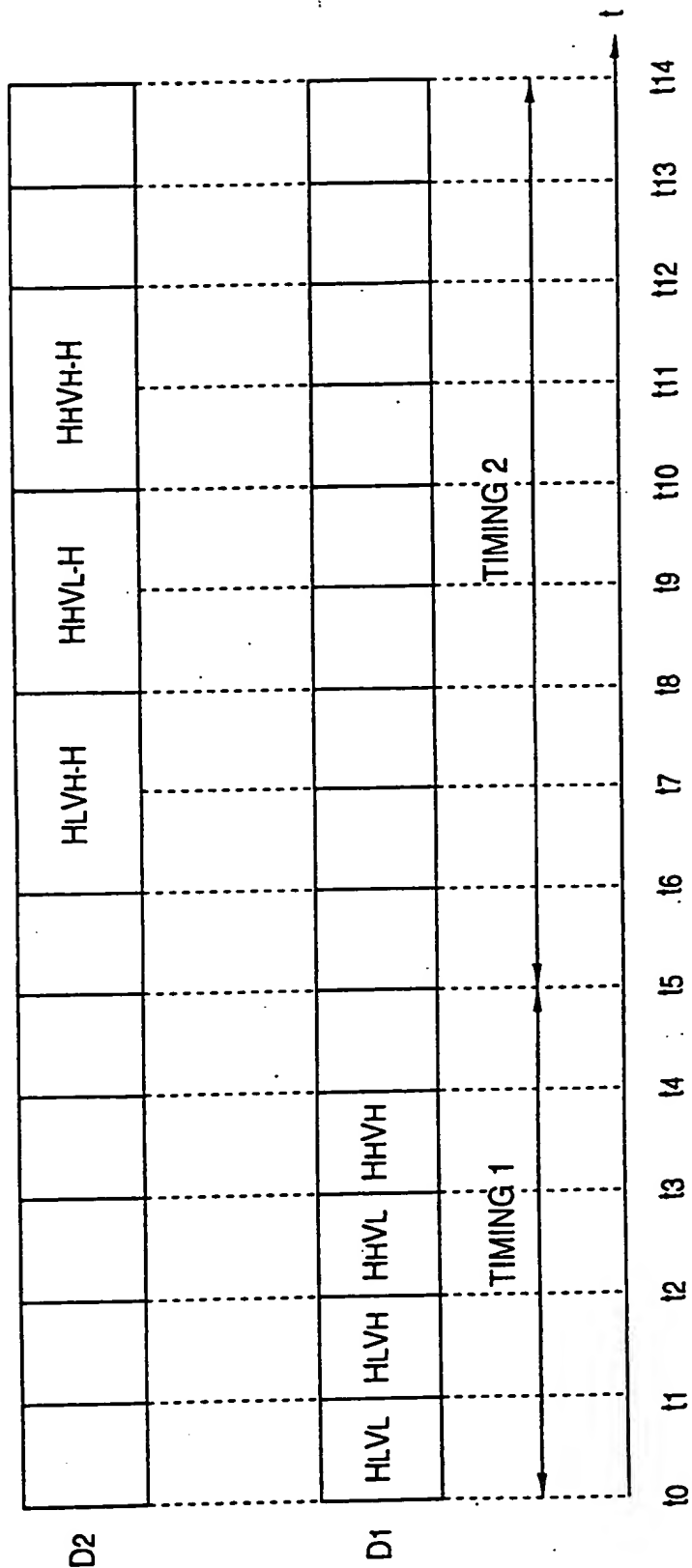




FIG. 74(a)

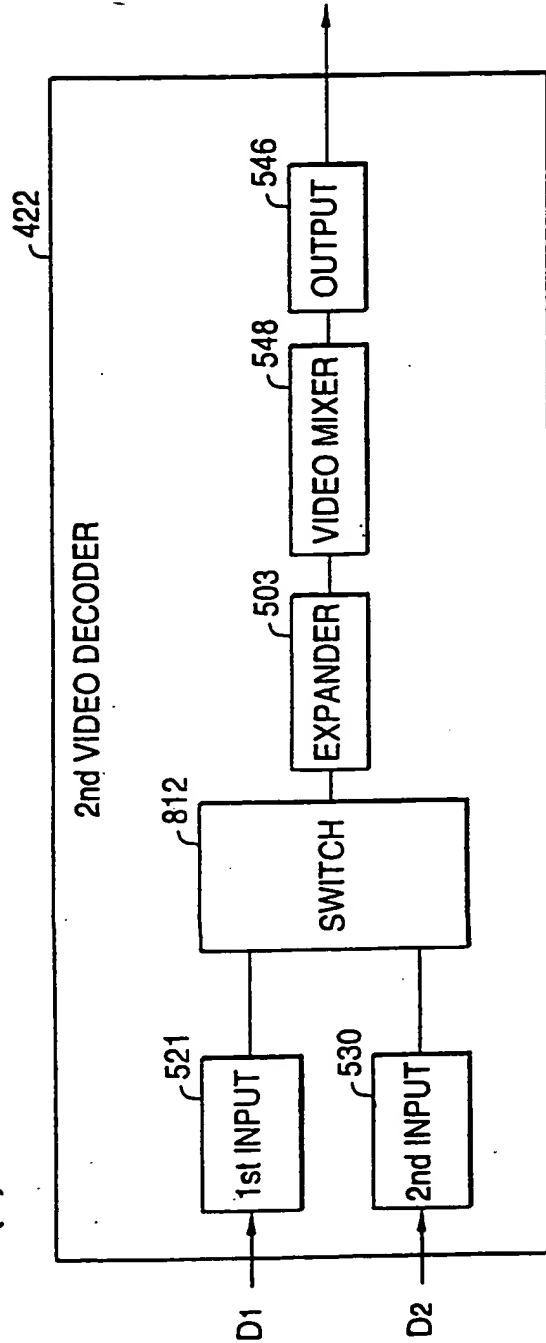
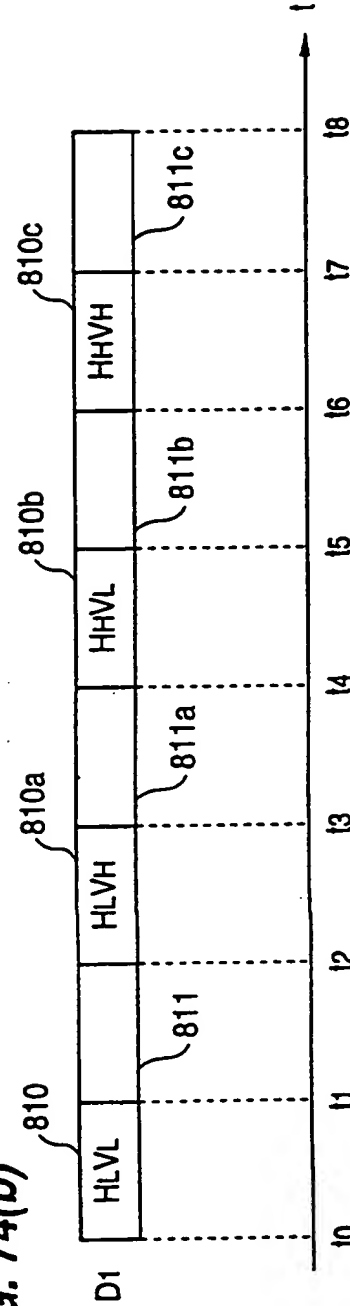
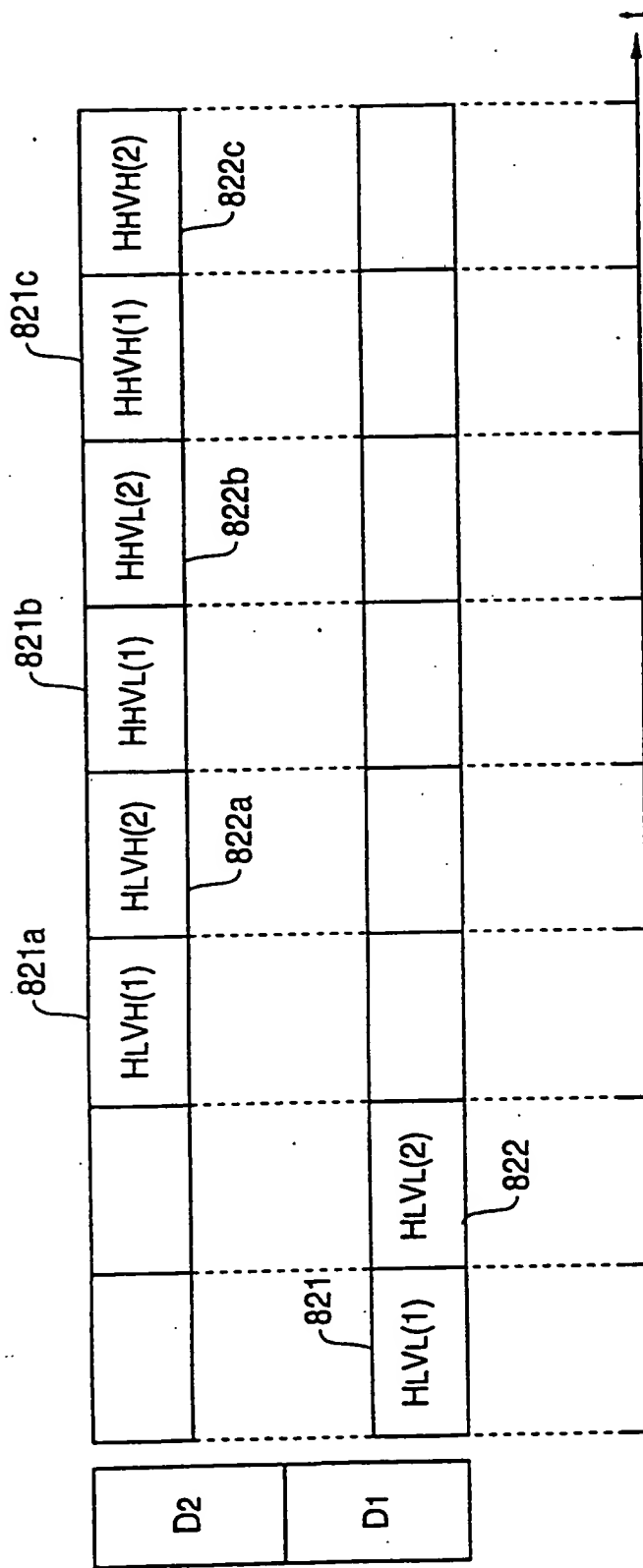


FIG. 74(b)



OIP E
 OCT 24 2002
 EVENT & TRANSFER

FIG. 75



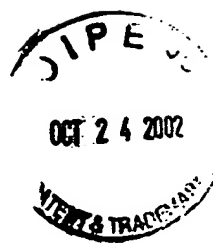


FIG. 76

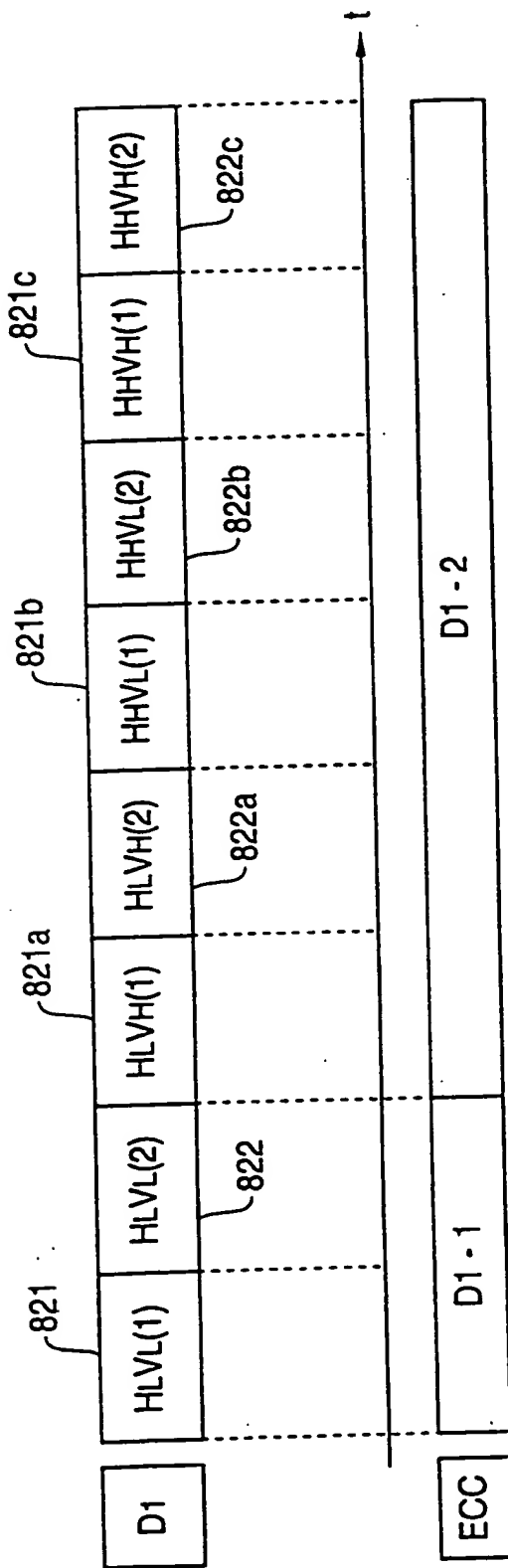




FIG. 77

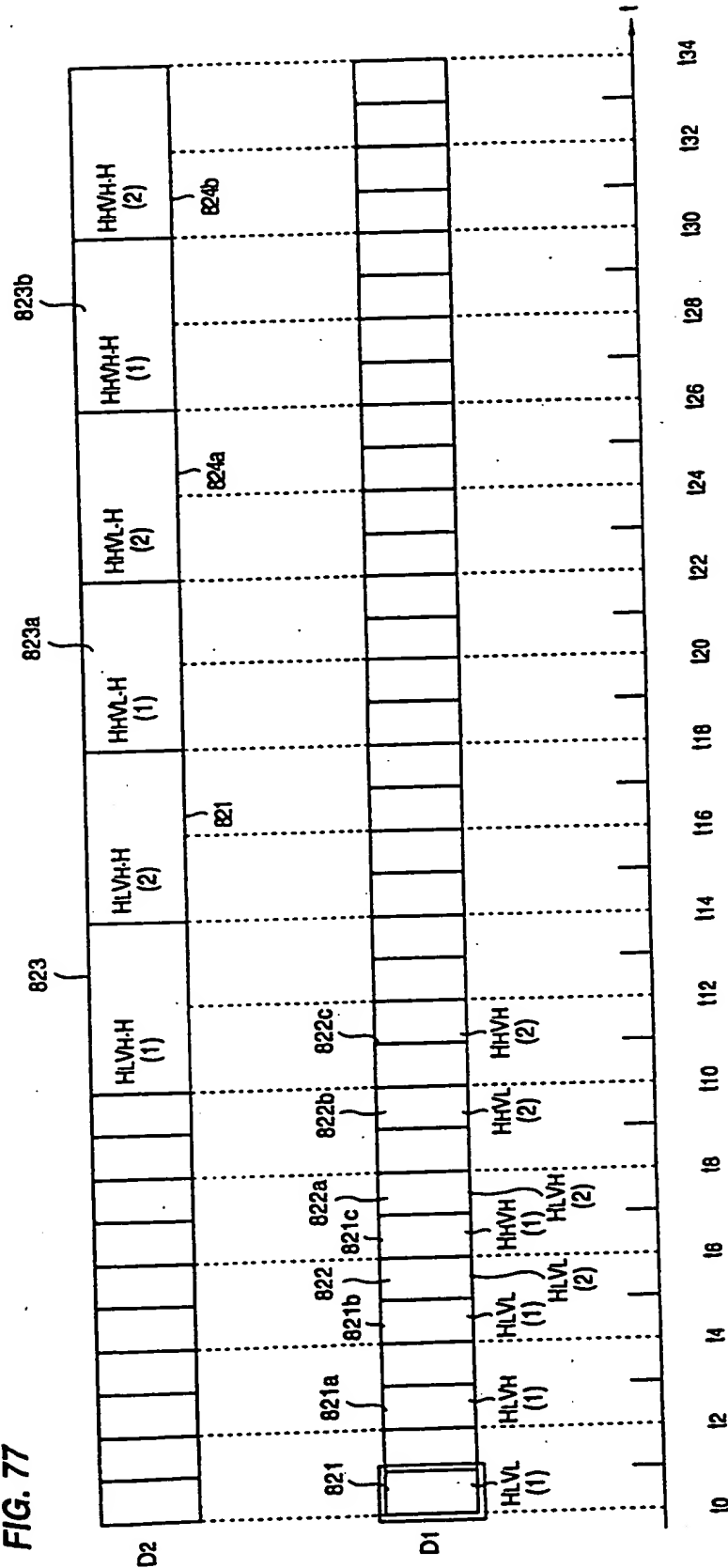


FIG. 78

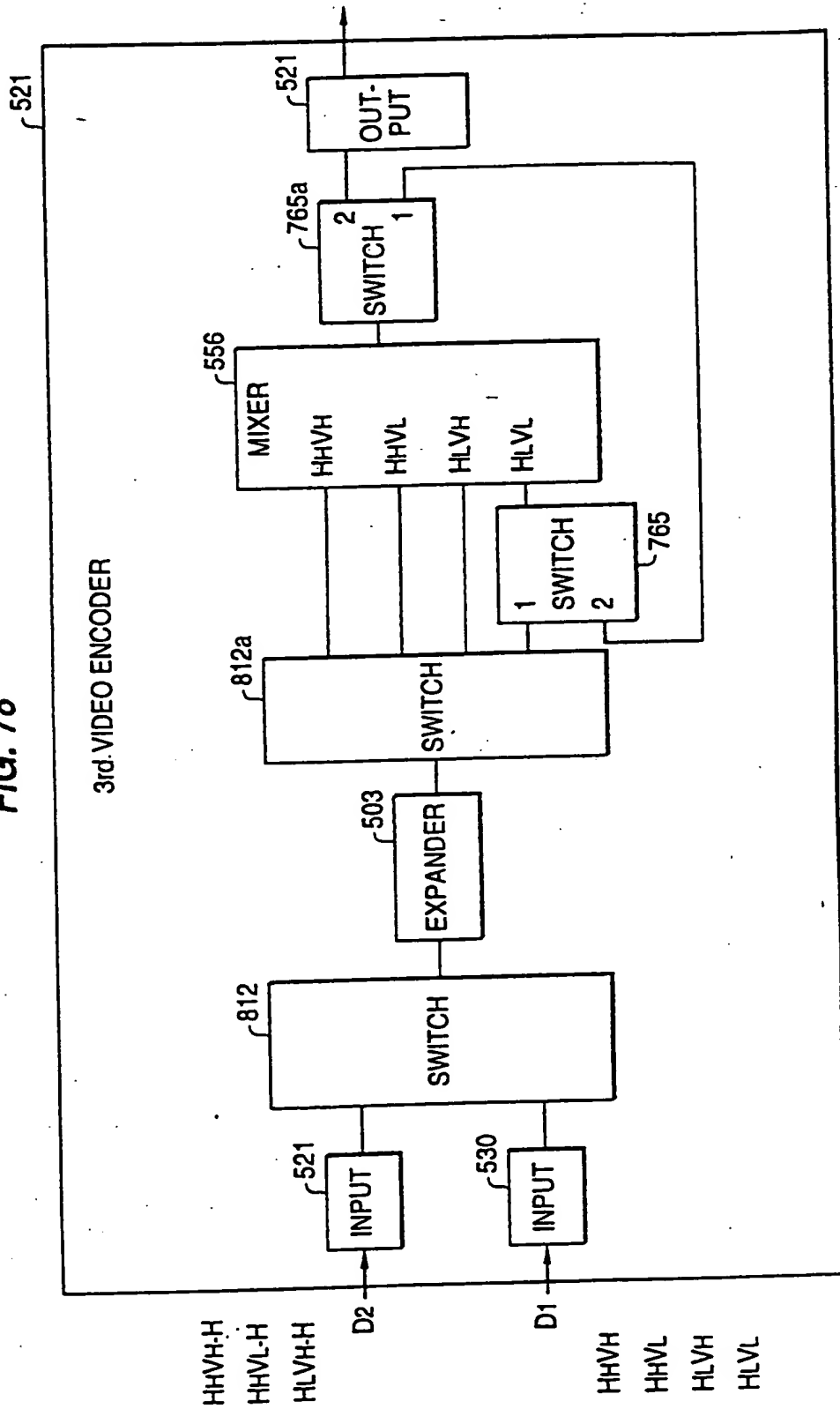




FIG. 79

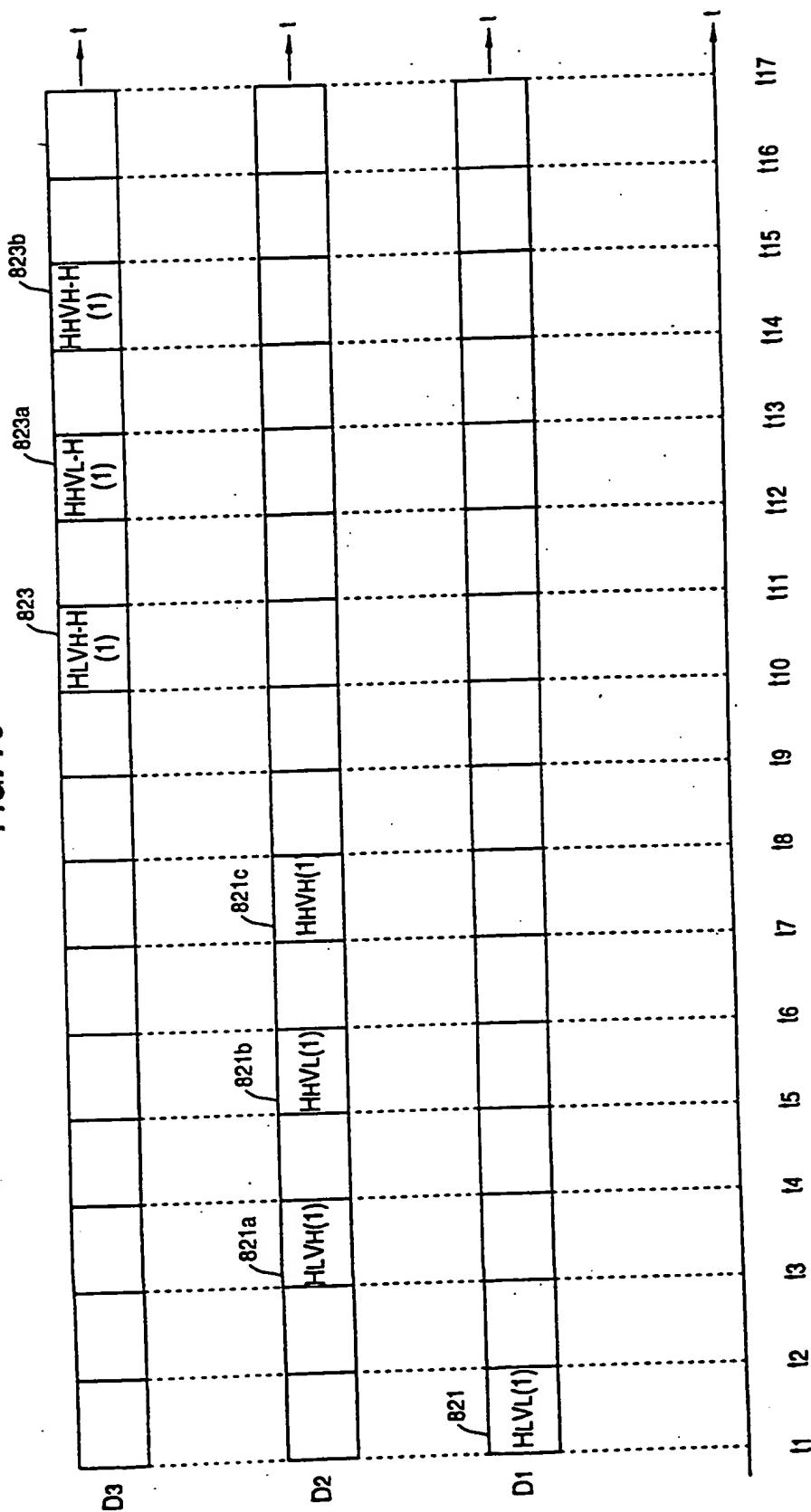




FIG. 80

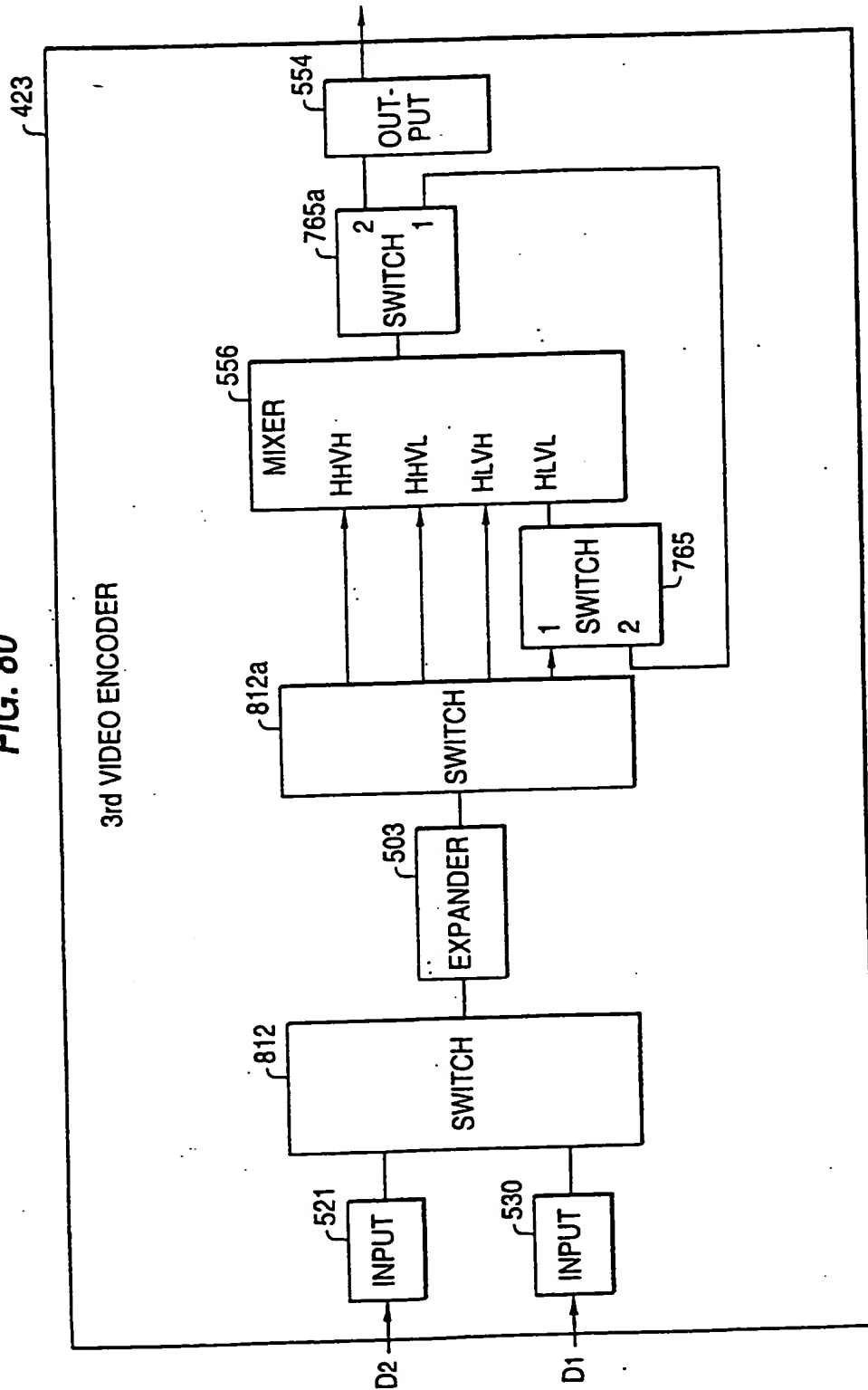




FIG. 81

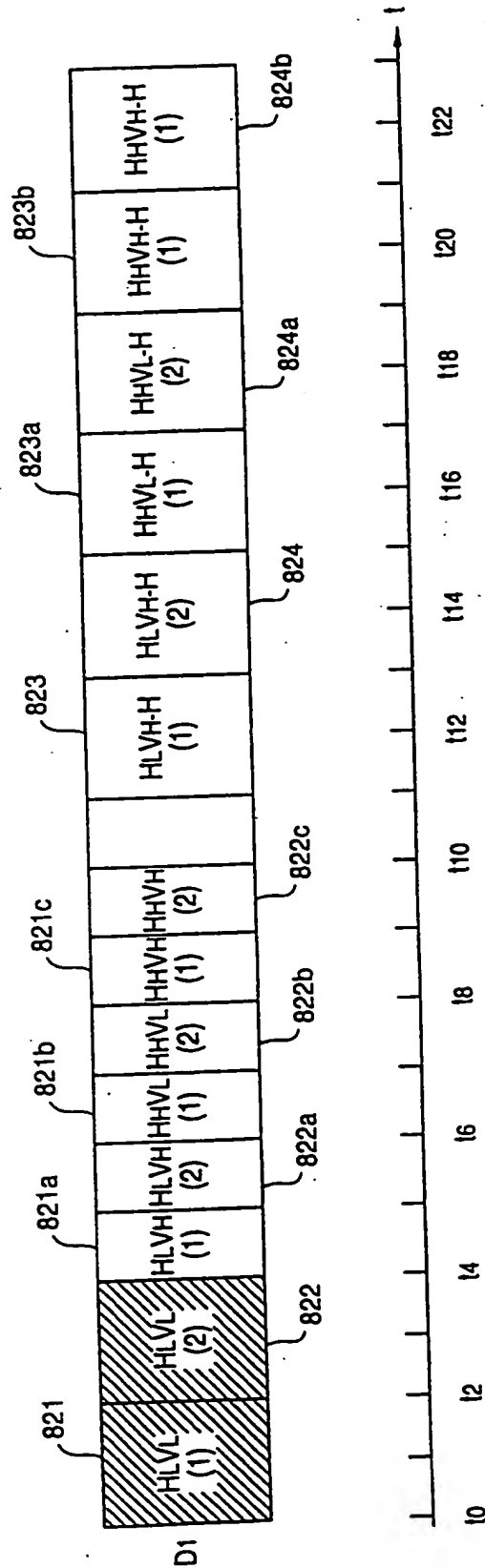




FIG. 82

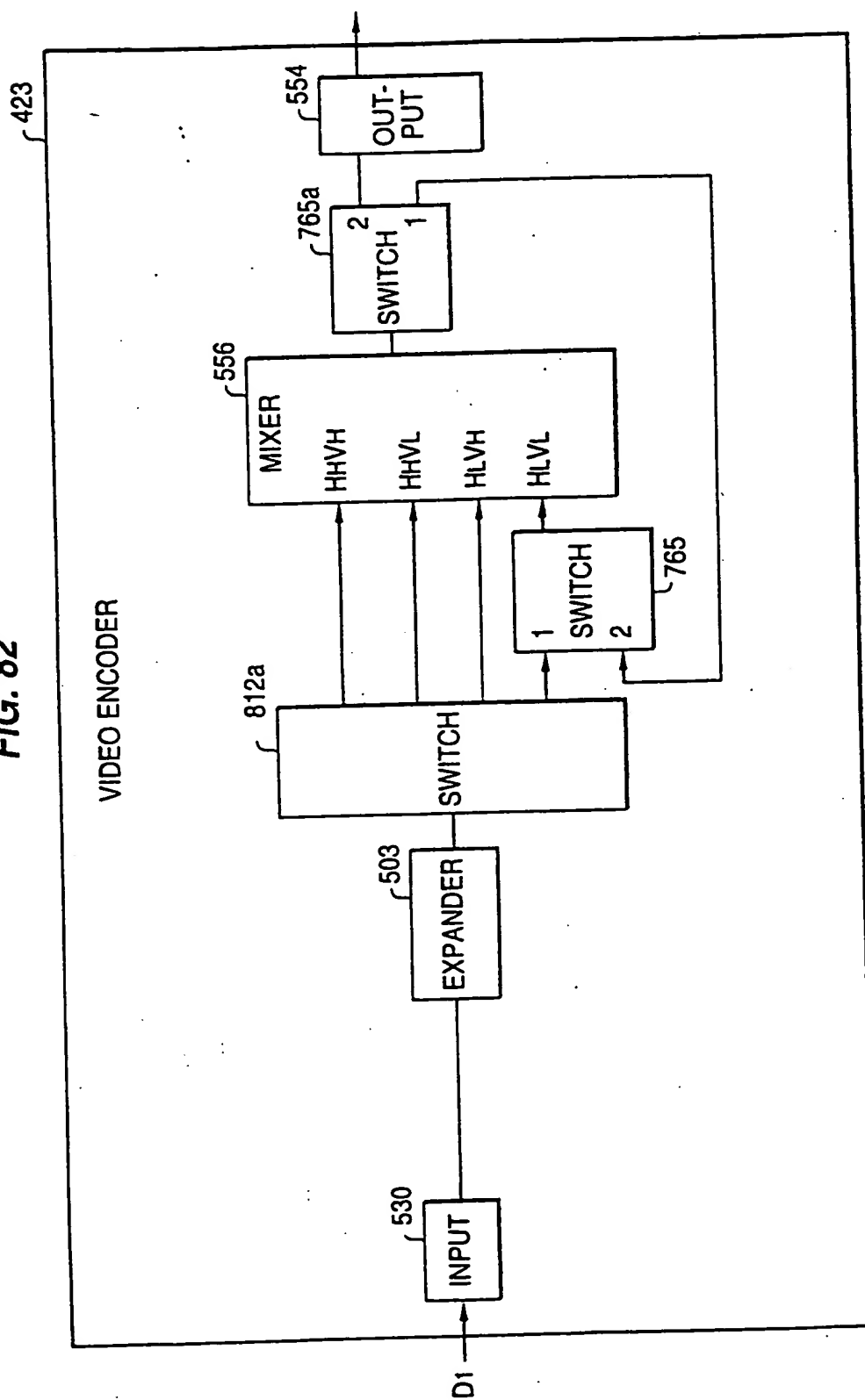




FIG. 83

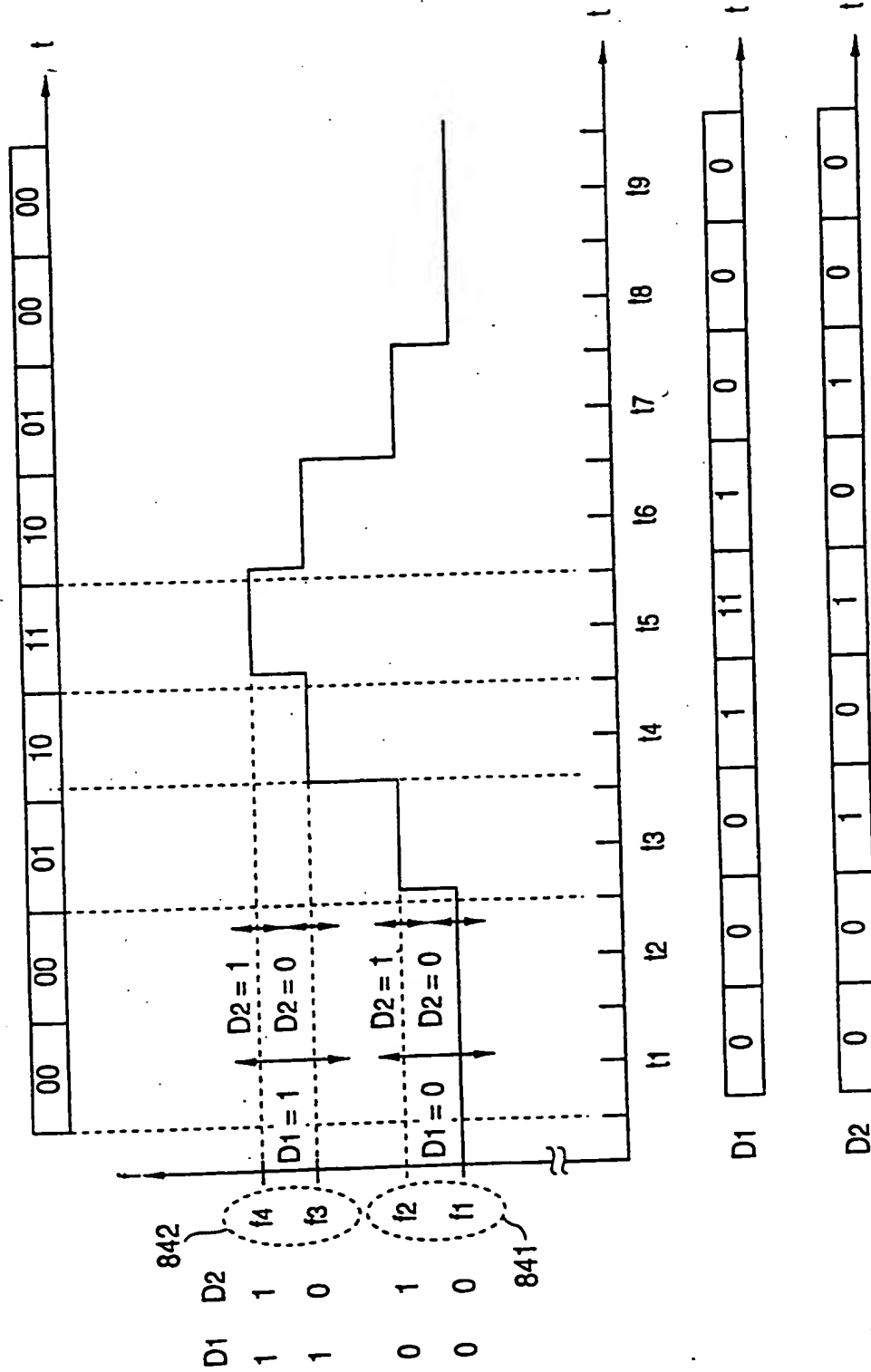




FIG. 84

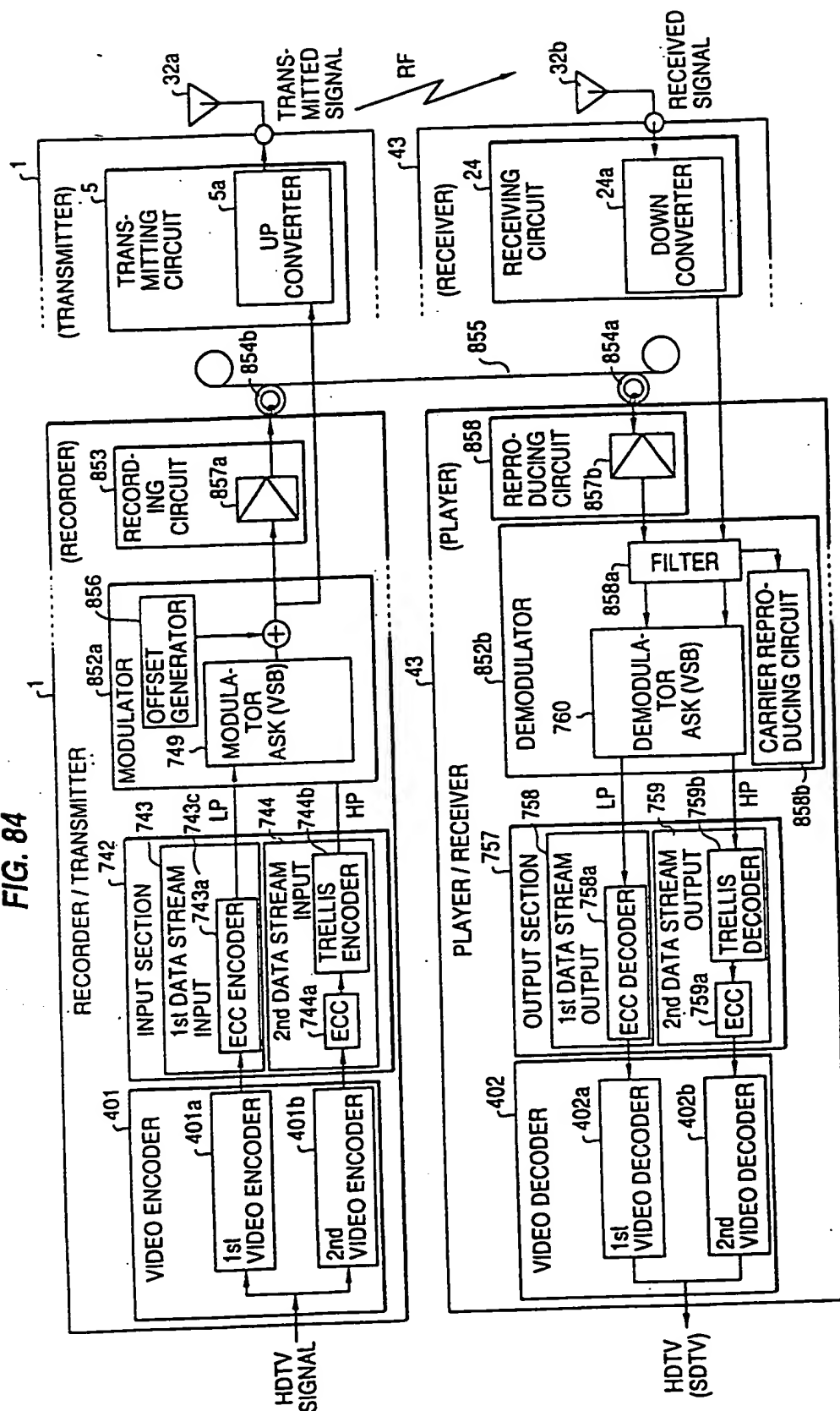




FIG. 85

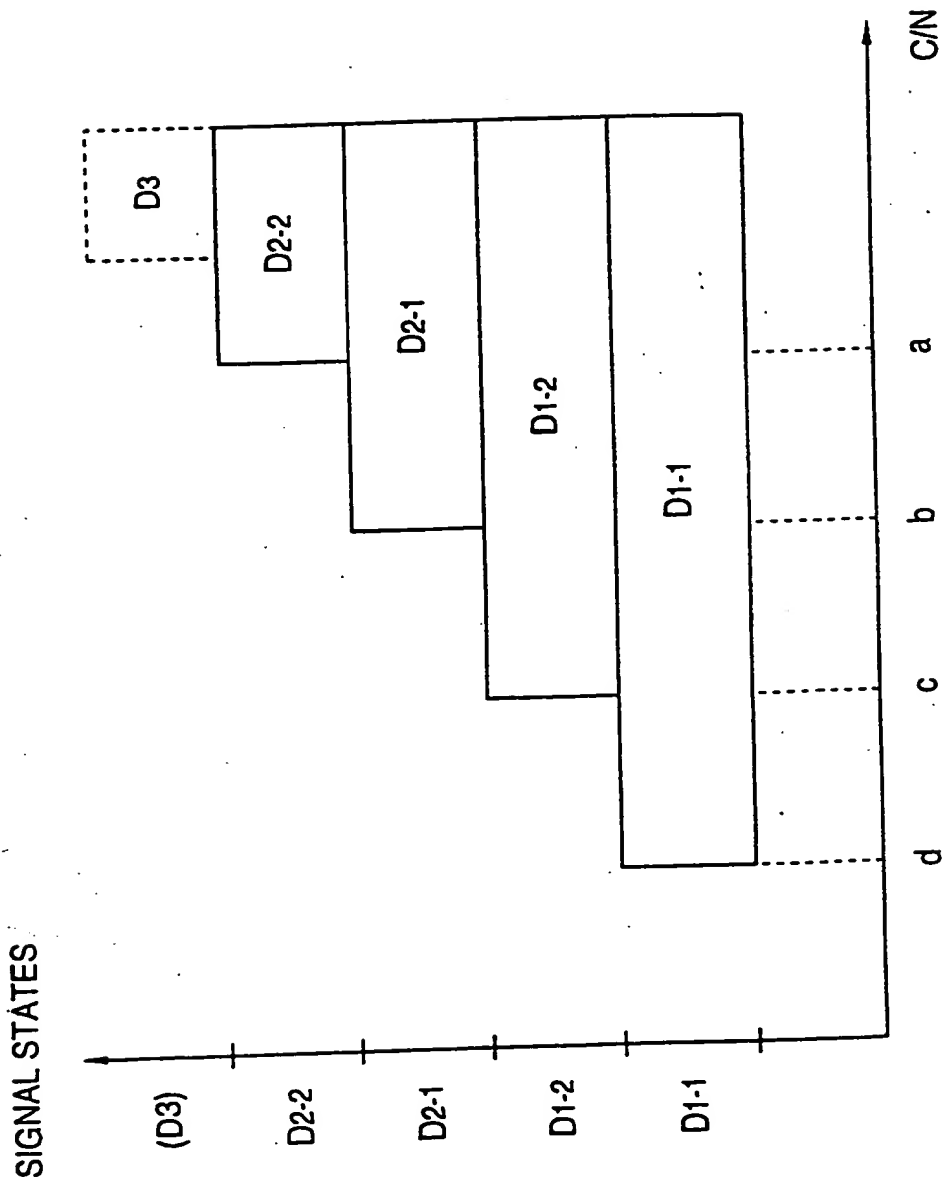




FIG. 86

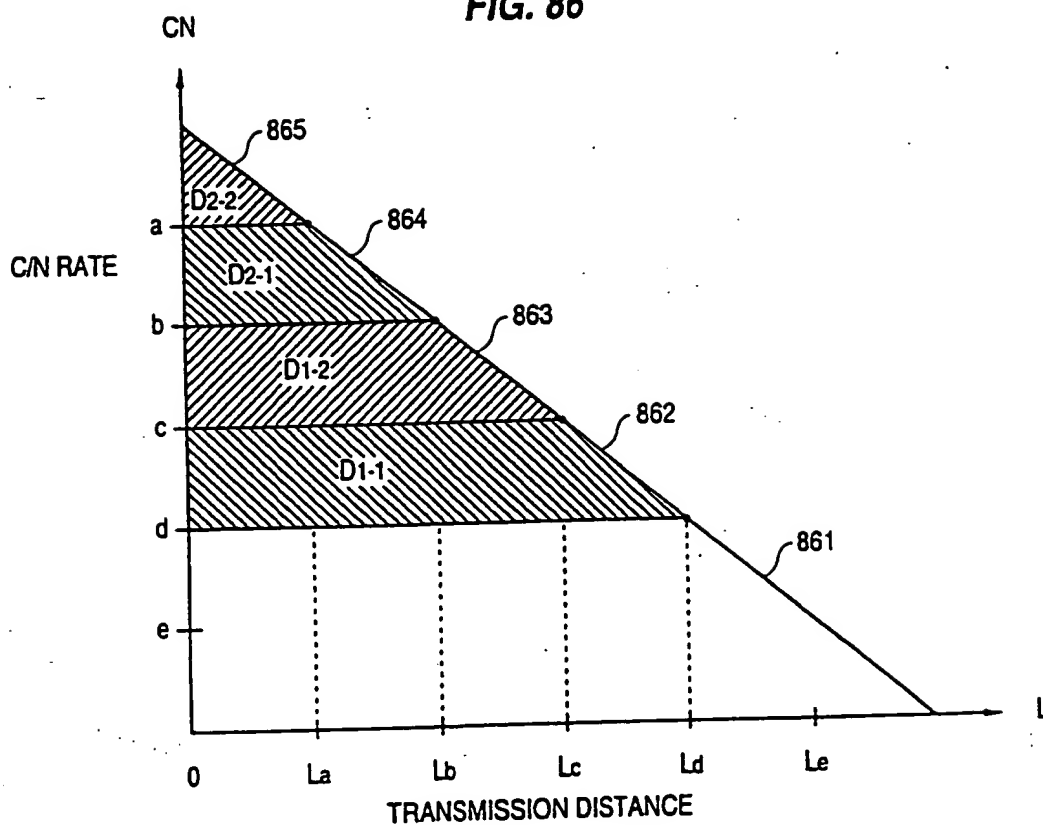




FIG. 87

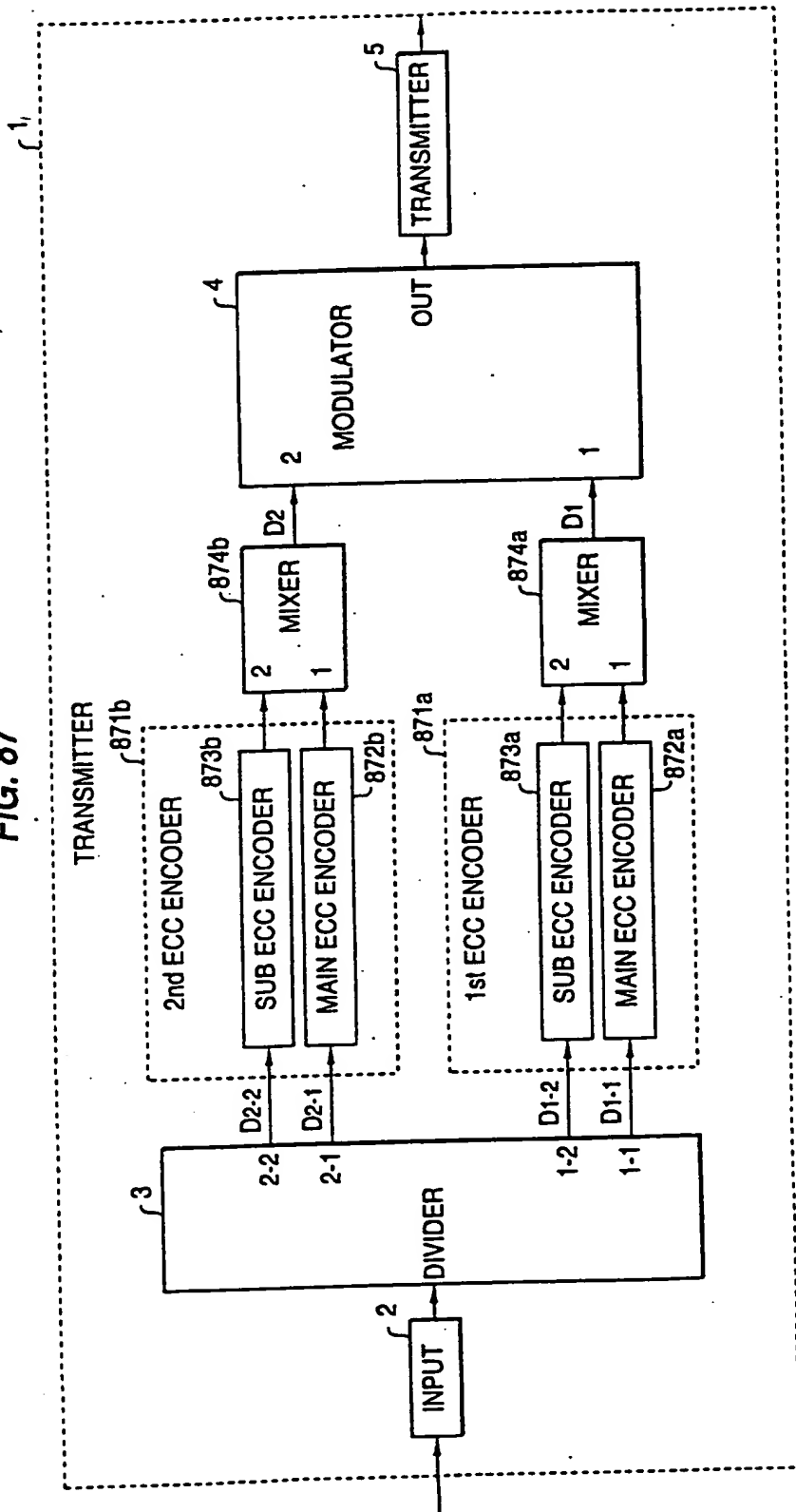




FIG. 88

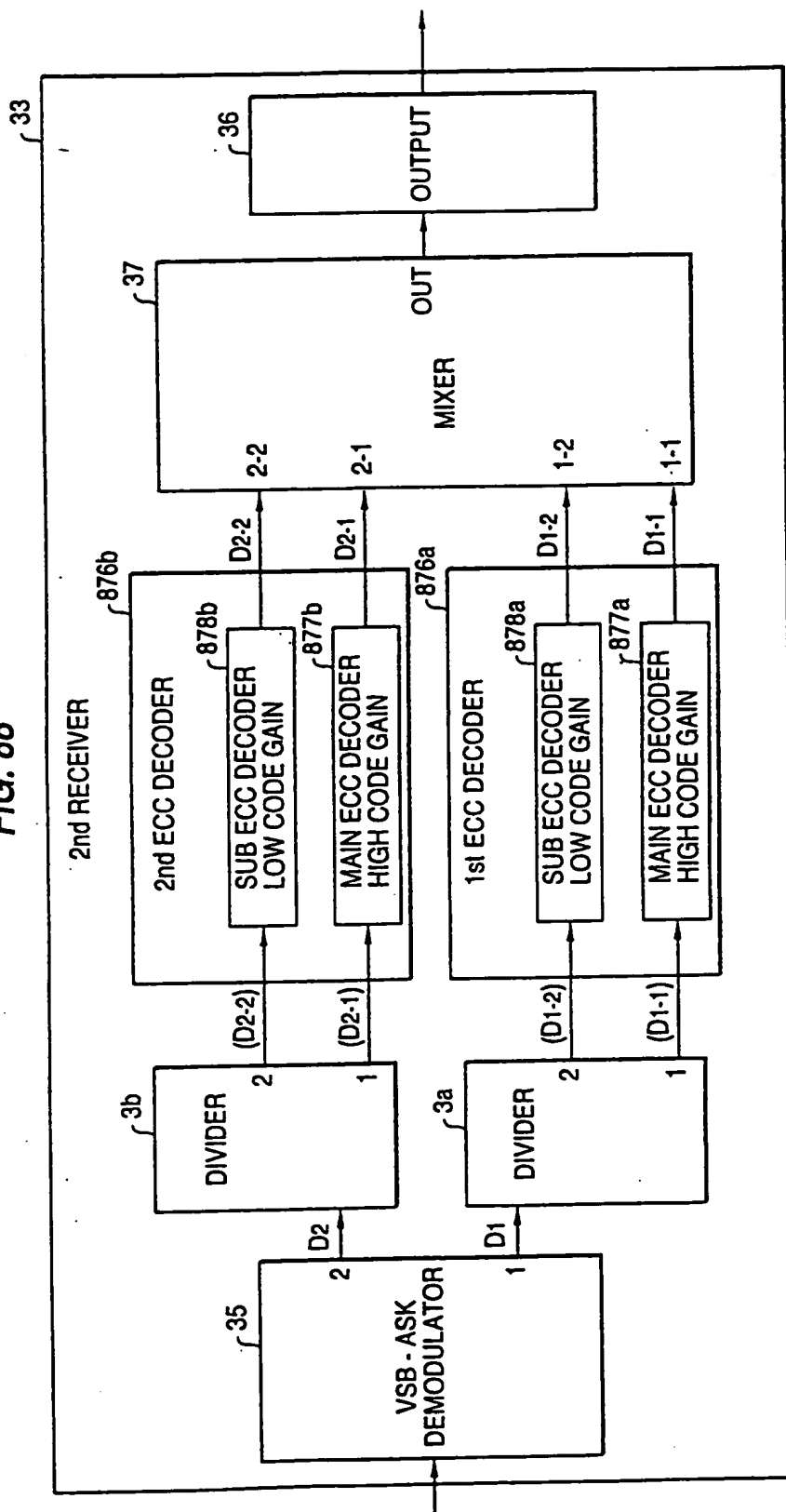




FIG. 89

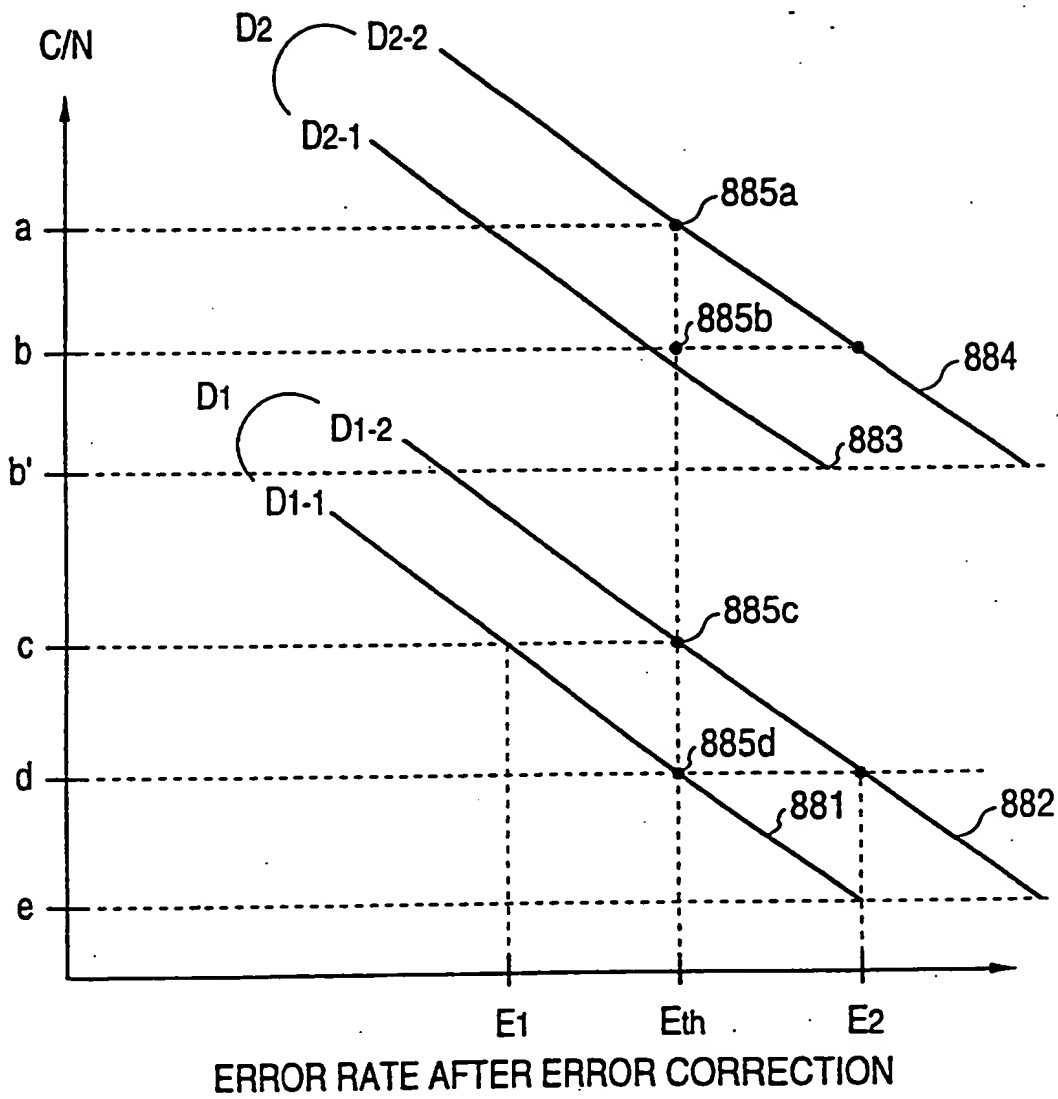




FIG. 90

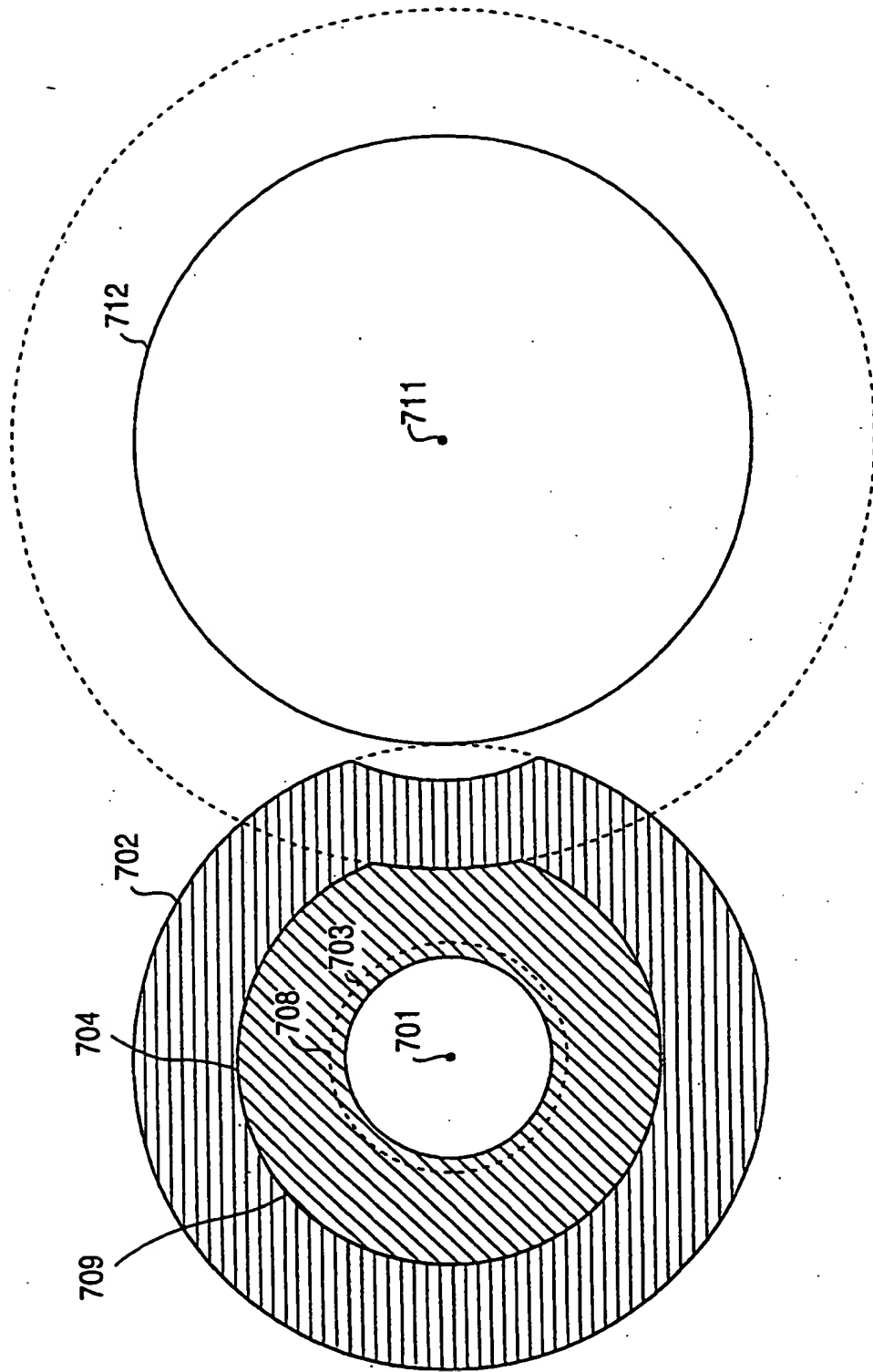




FIG. 91

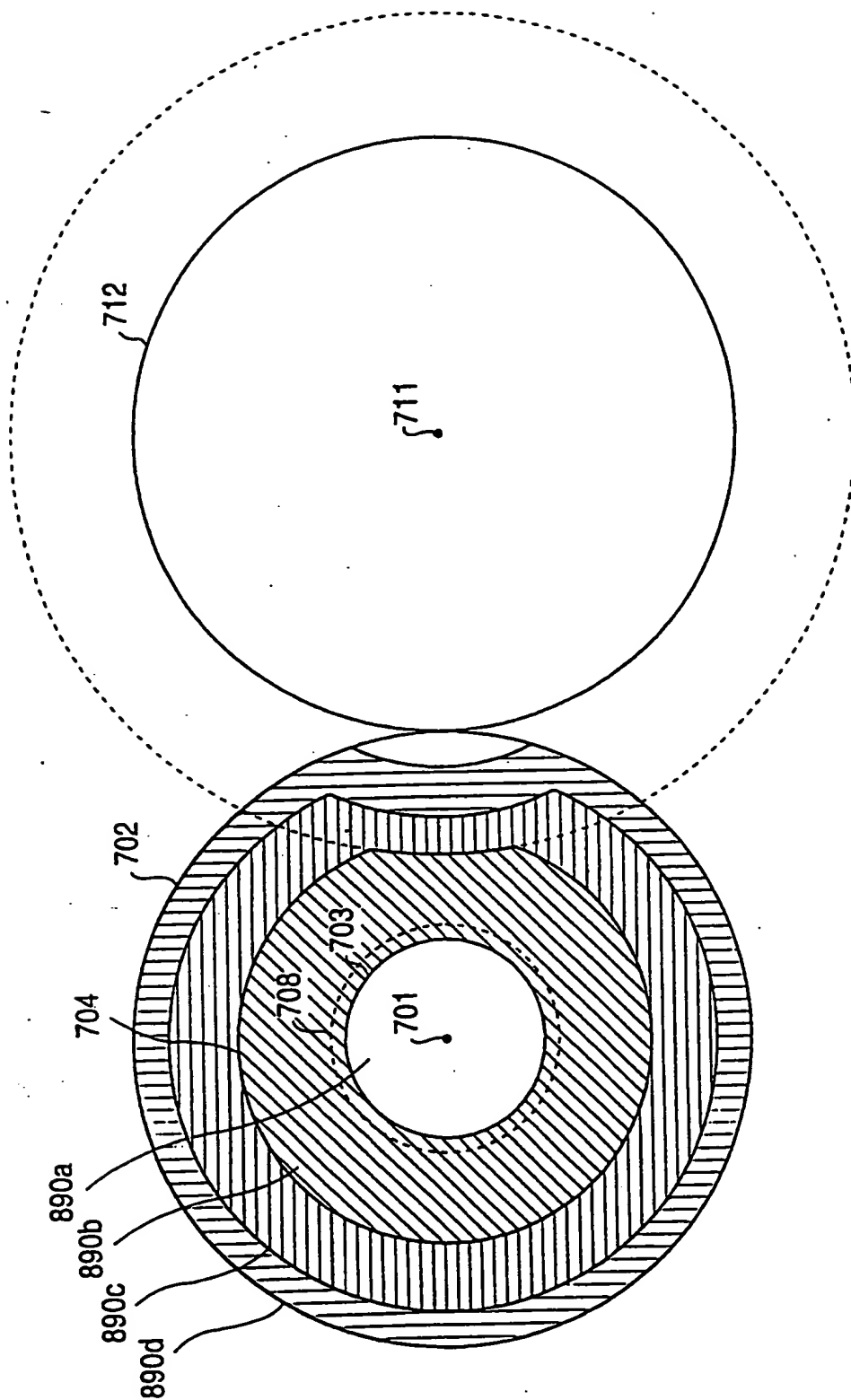


FIG. 92

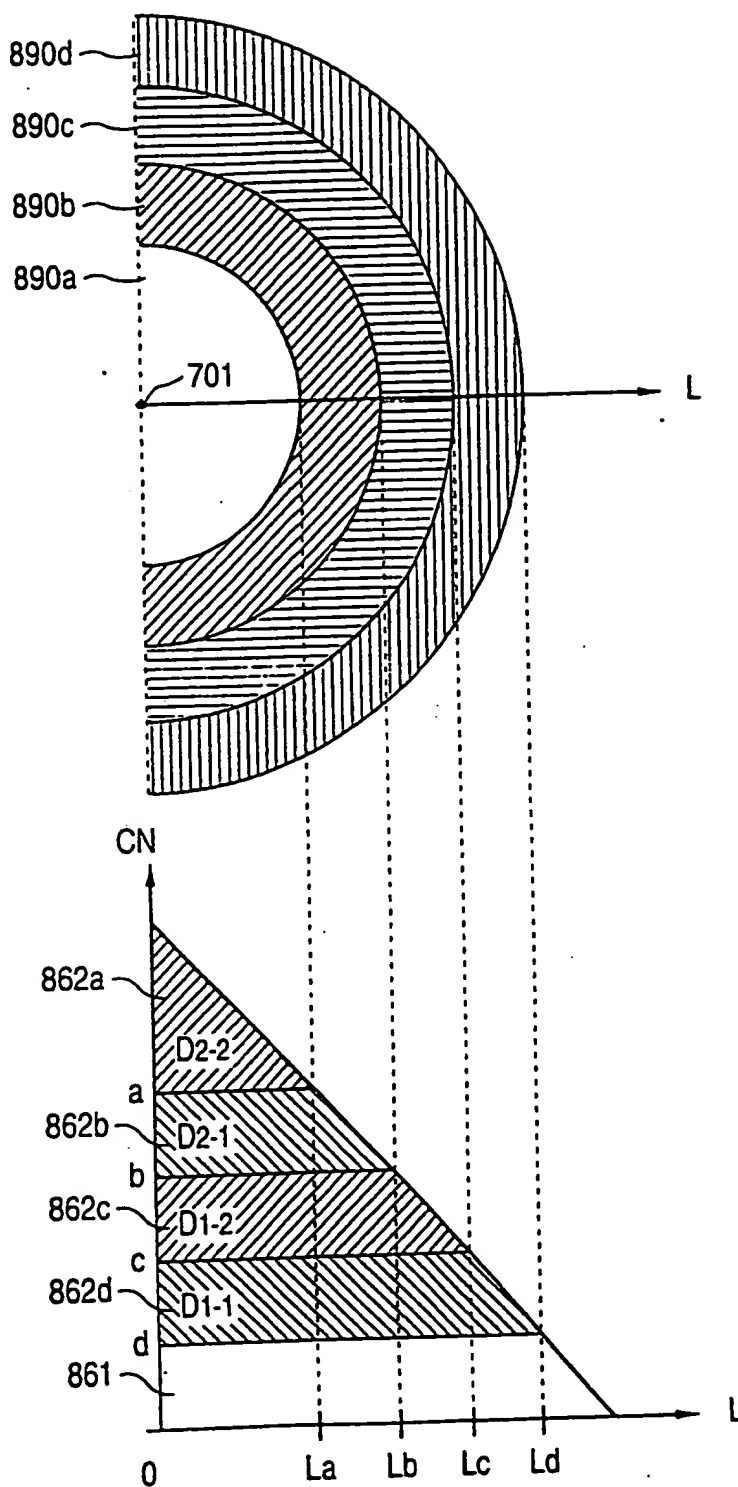




FIG. 93

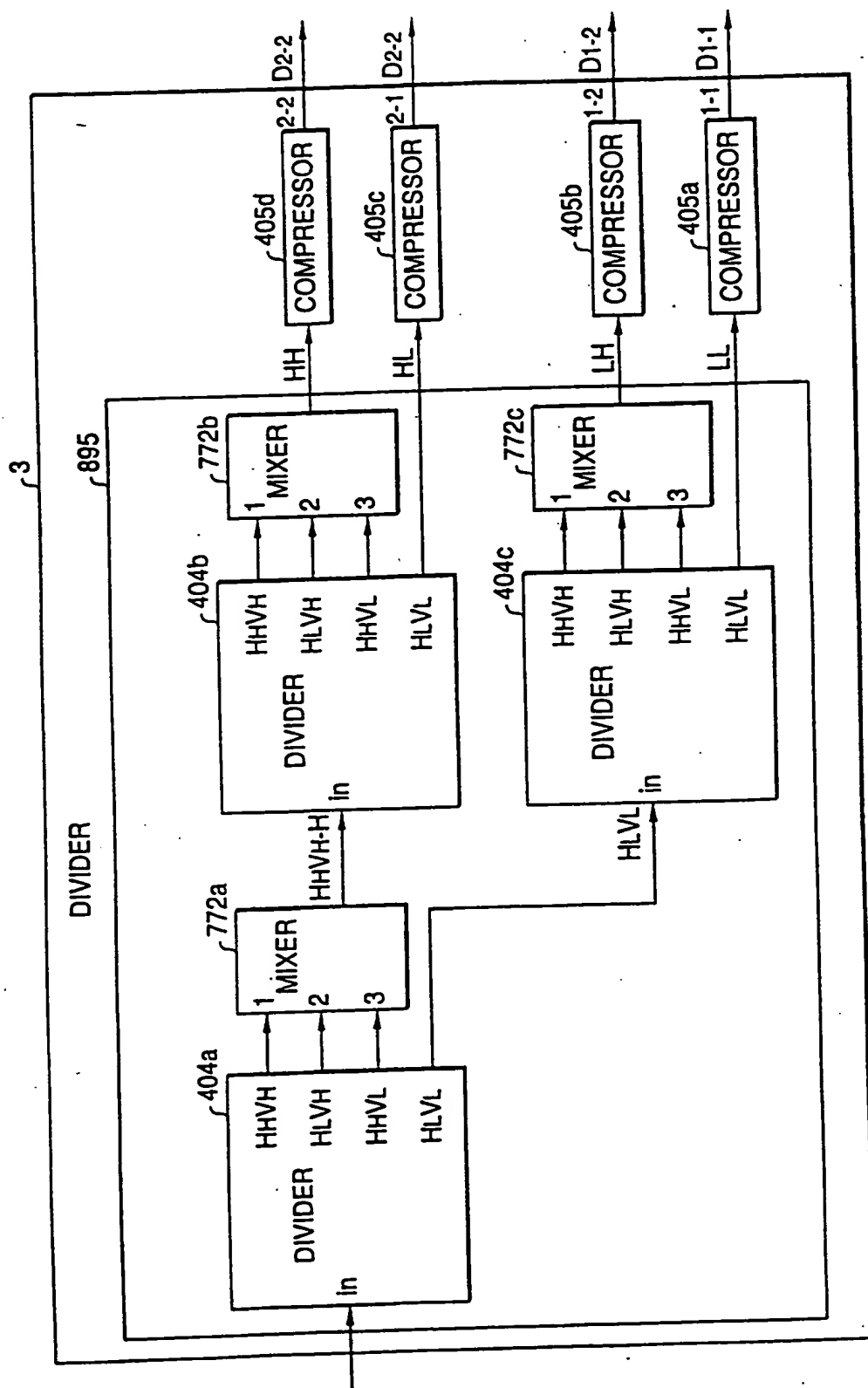




FIG. 94

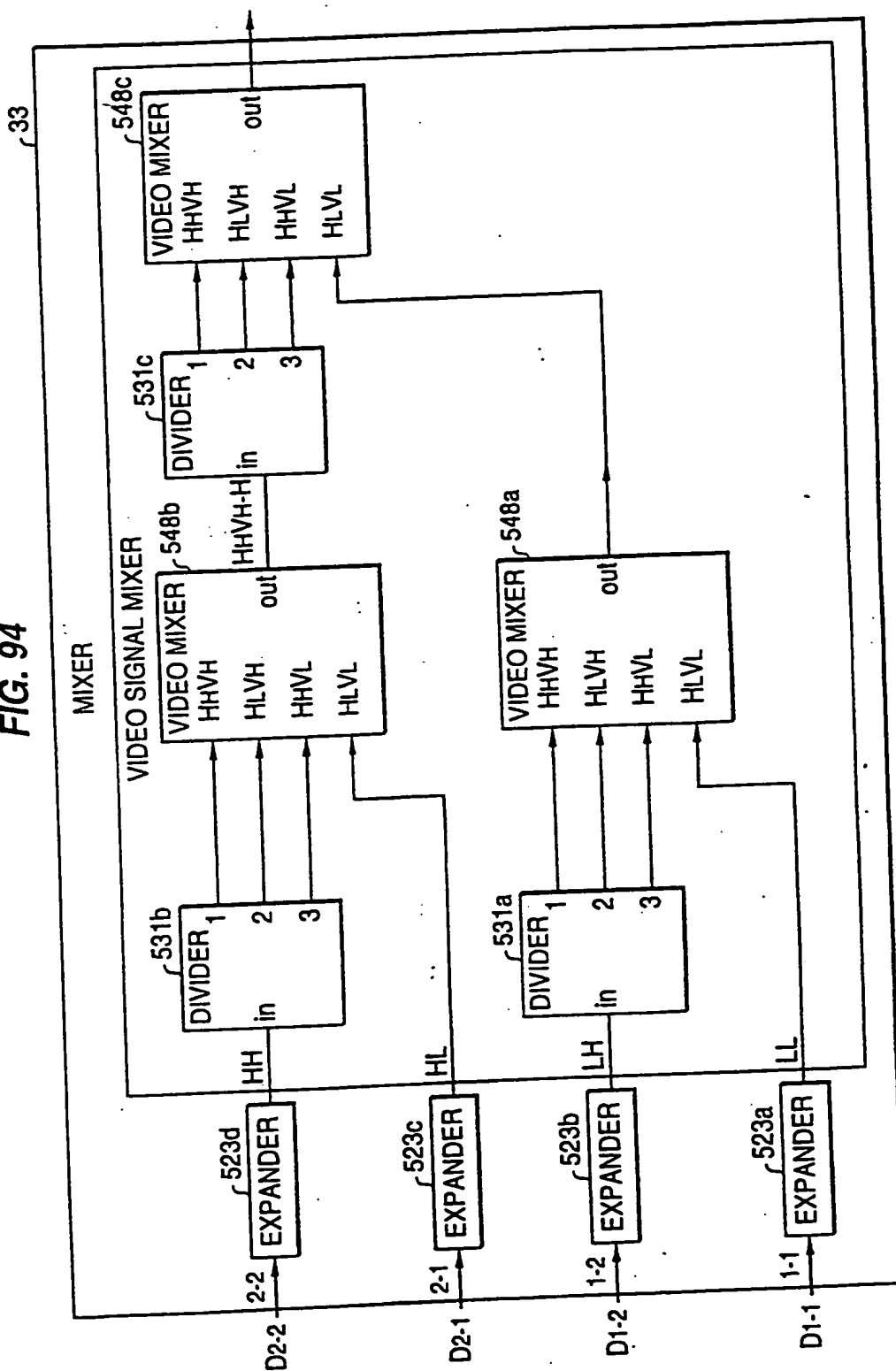
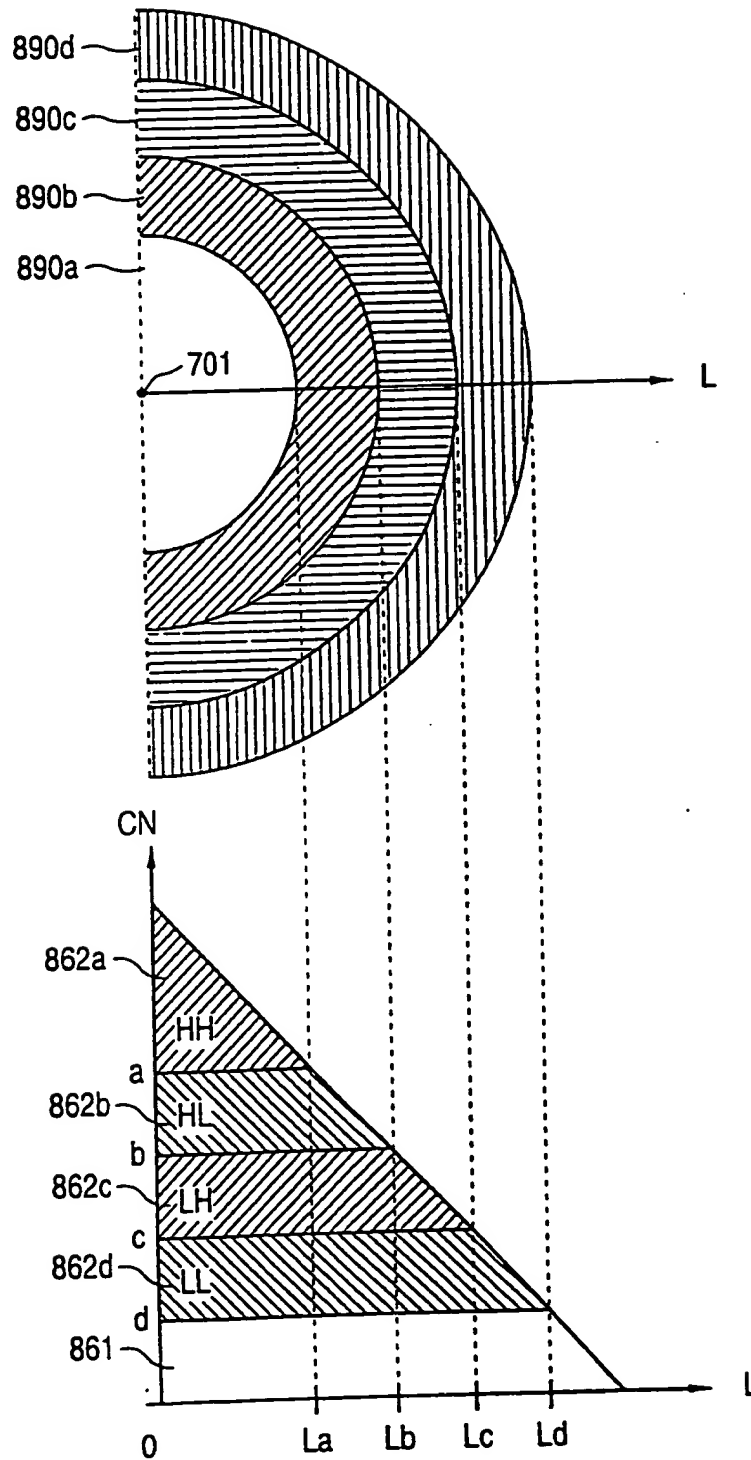




FIG. 95



O I P E J C 8 7
O C T 2 4 2 0 0 2
P A T E N T & T R A D E M A R K O F F I C E

U.S. Patent

Feb. 4, 1997

Sheet 95 of 178

5,600,672

FIG. 96

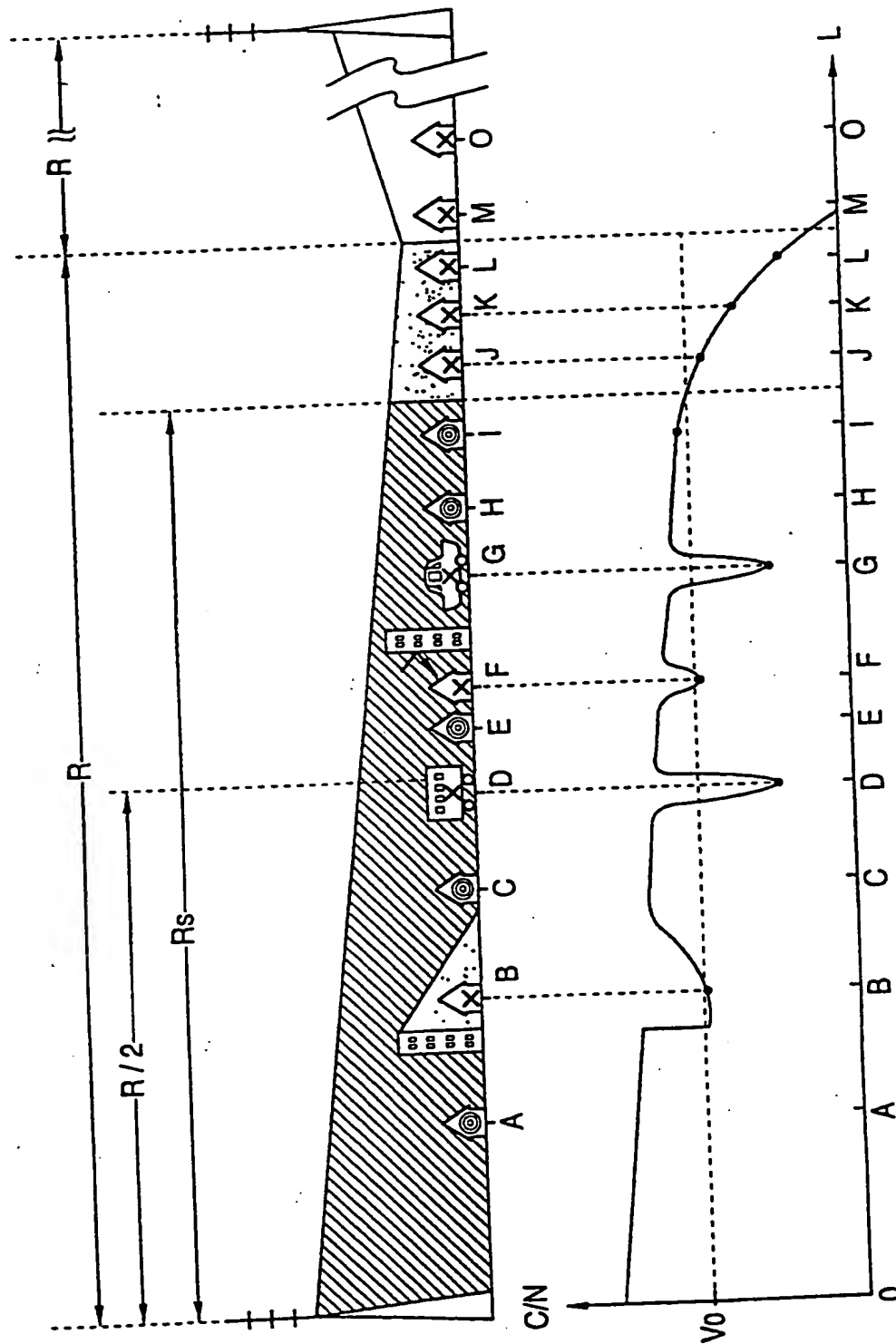




FIG. 97

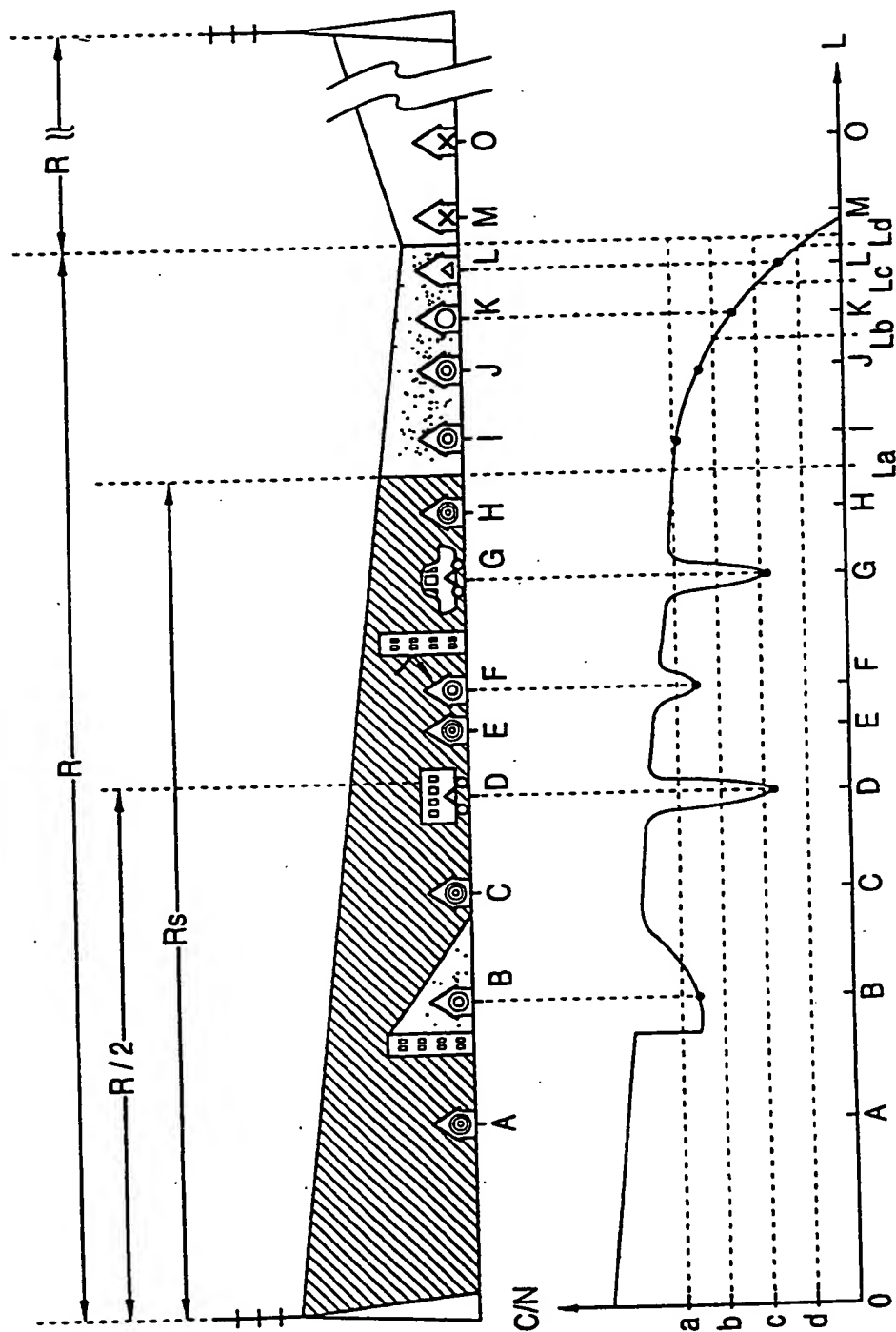




FIG. 98

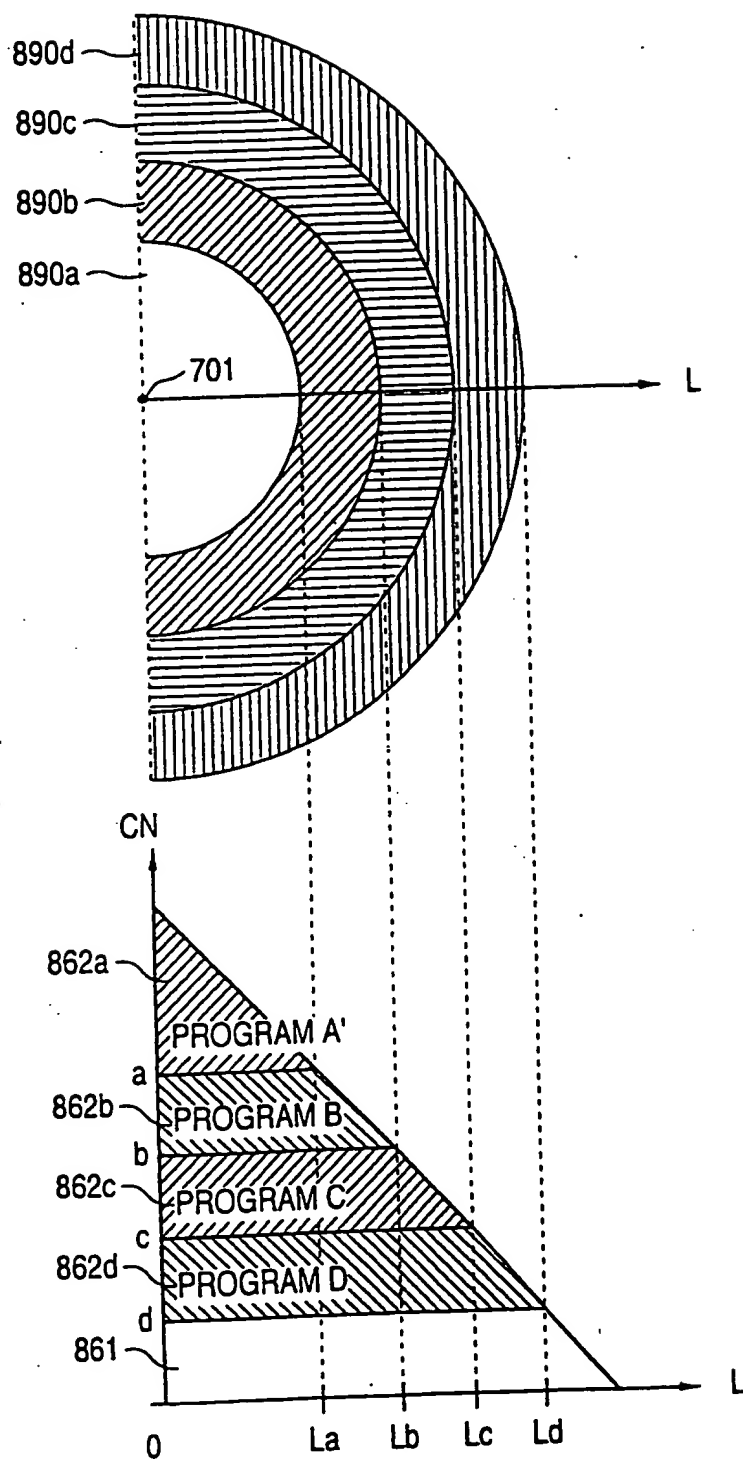




FIG. 99

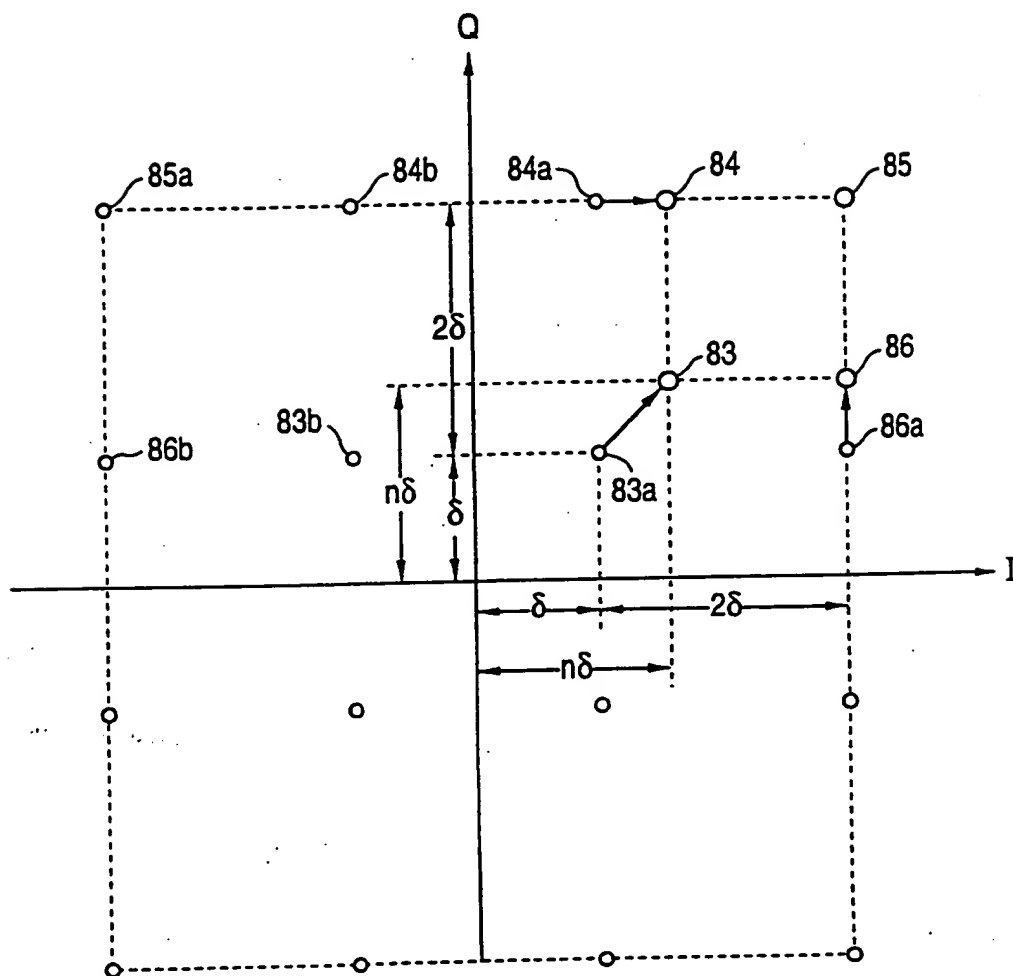




FIG. 100

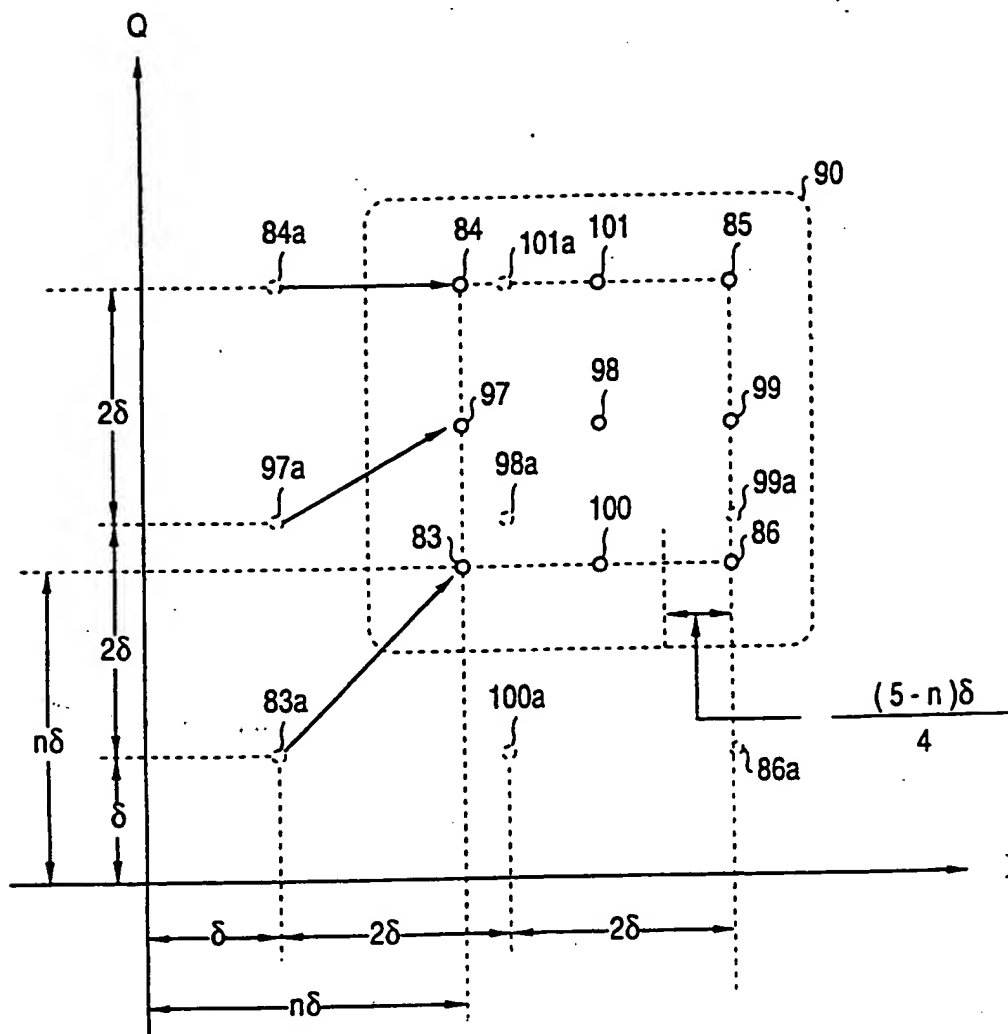




FIG. 101

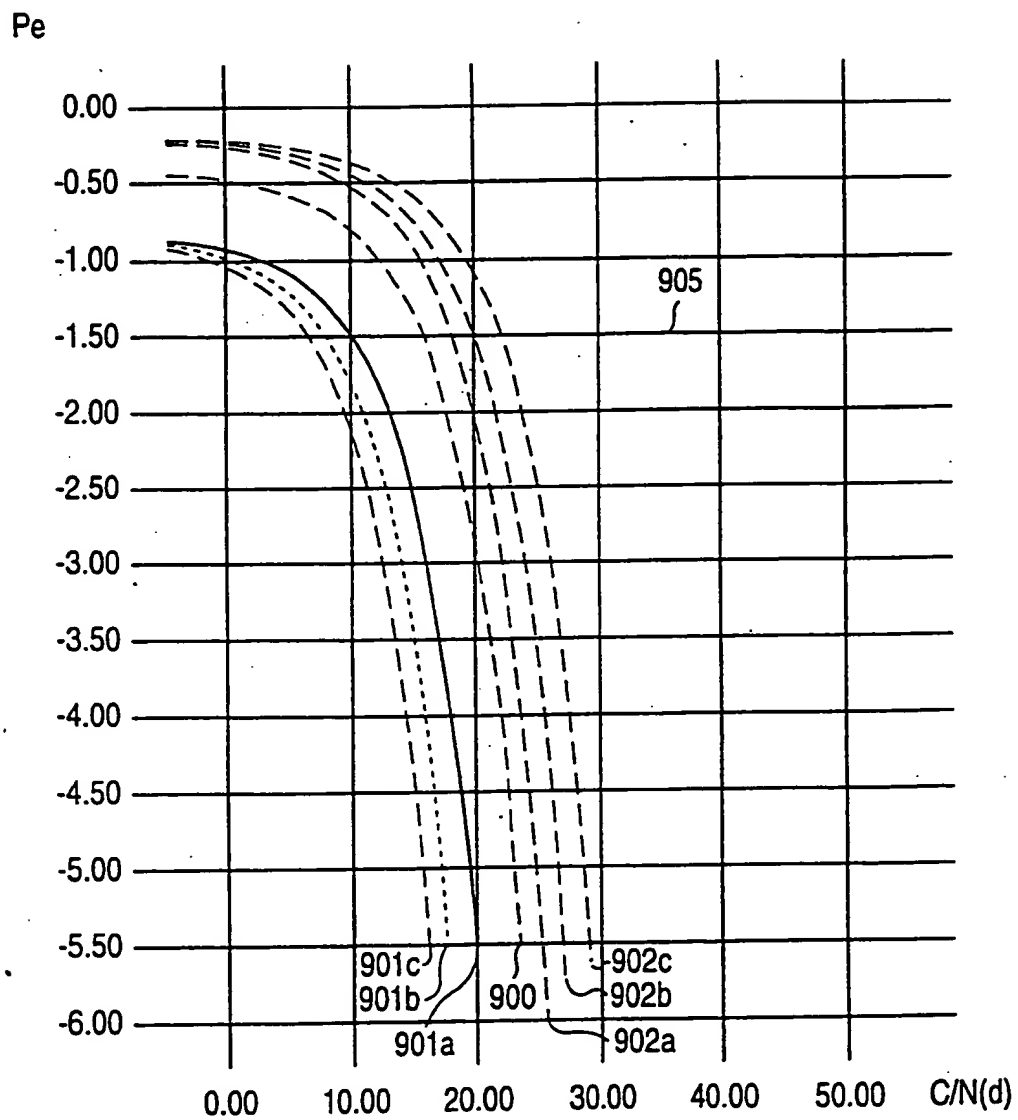




FIG. 102

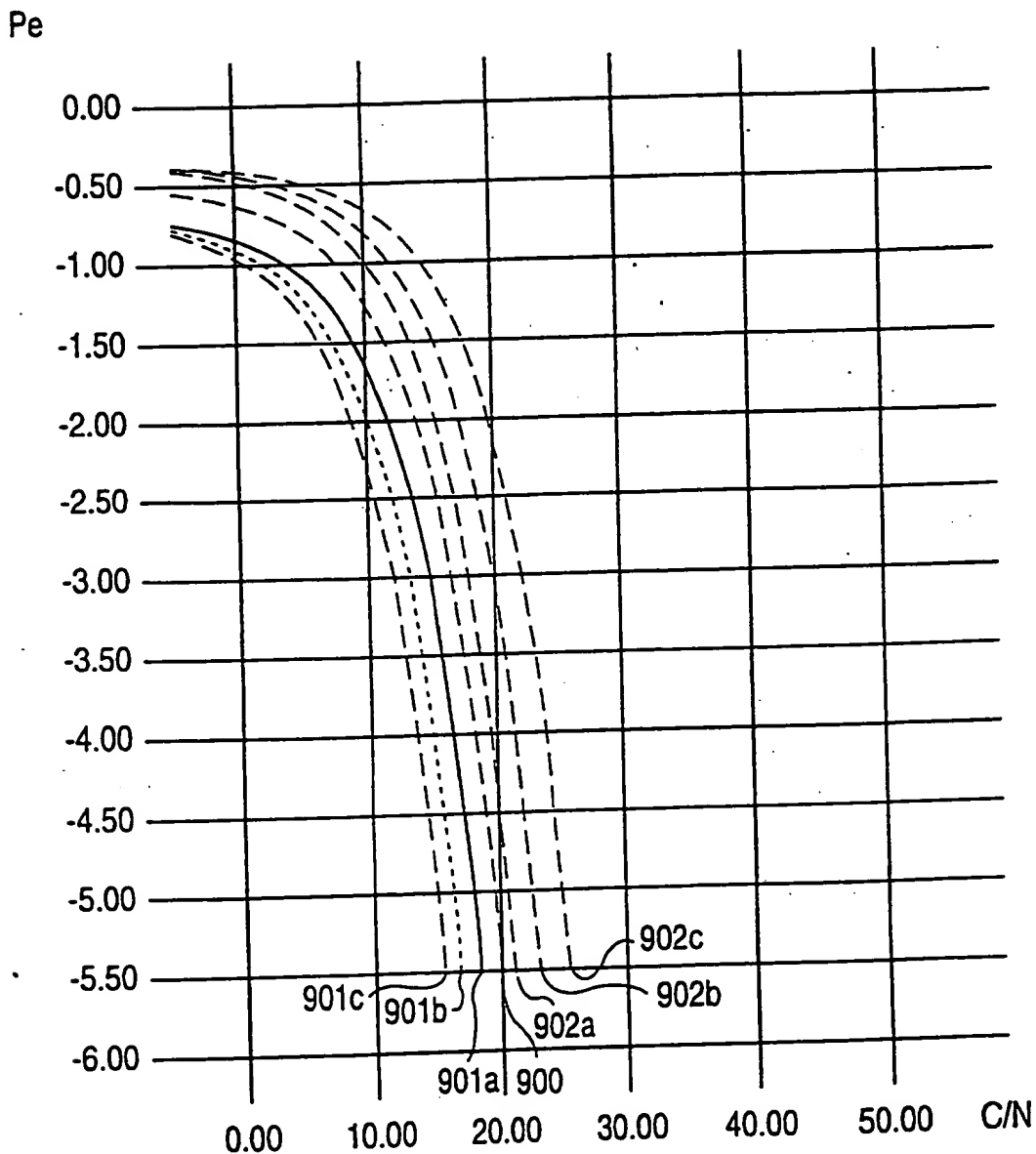
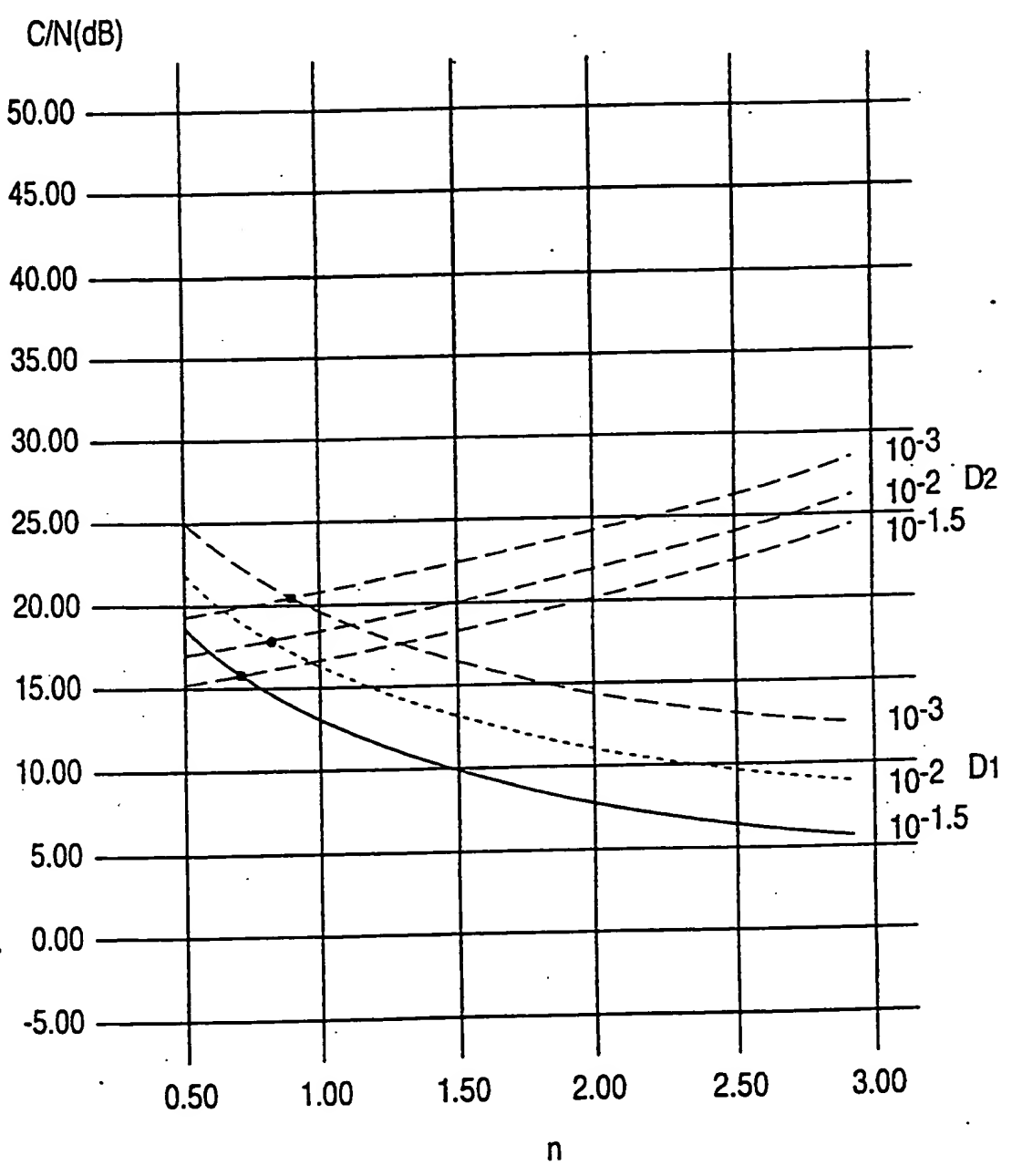




FIG. 103





OCT 24 2002

U.S. Patent

Feb. 4, 1997

Sheet 103 of 178

5,600,672

FIG. 104

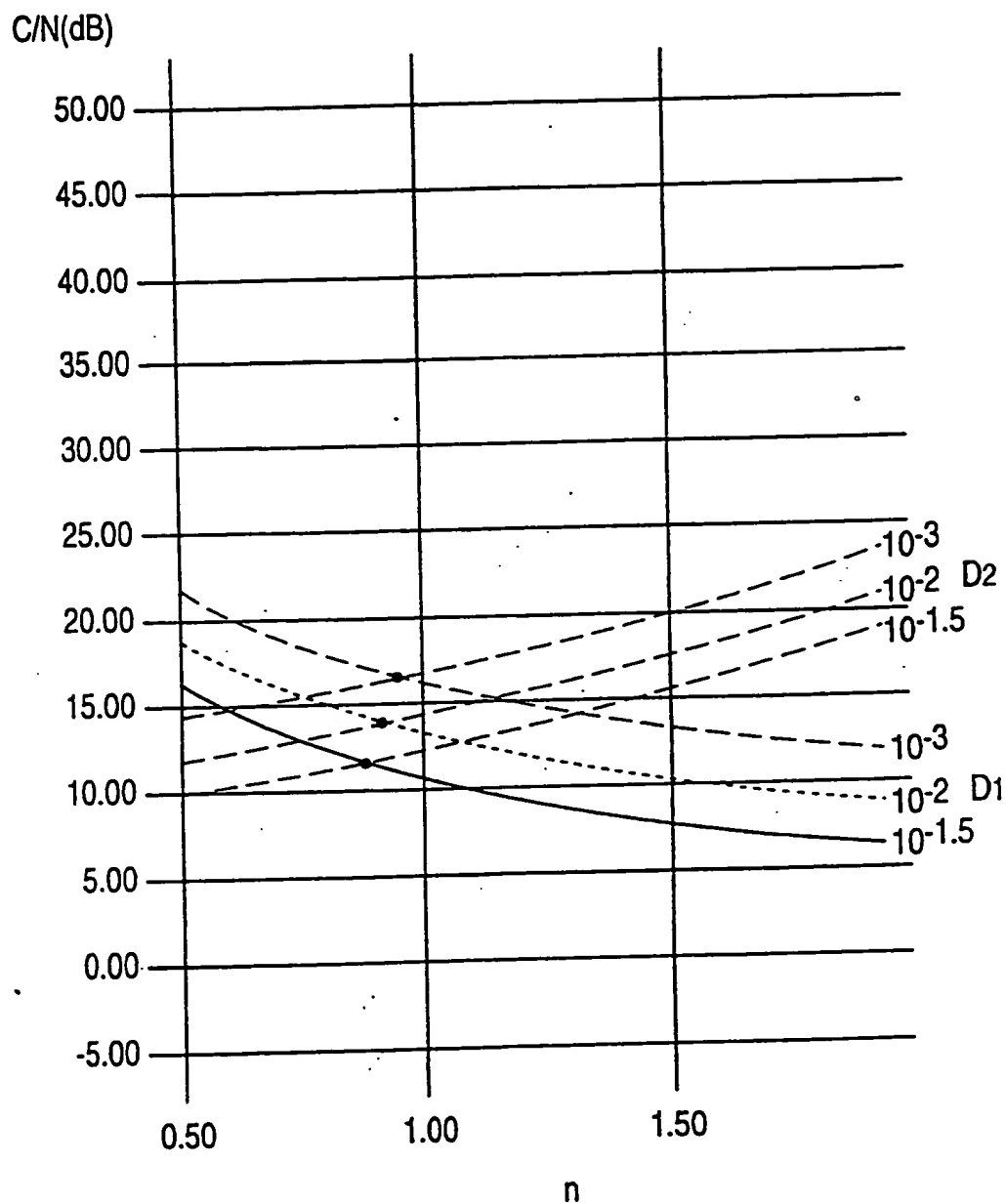
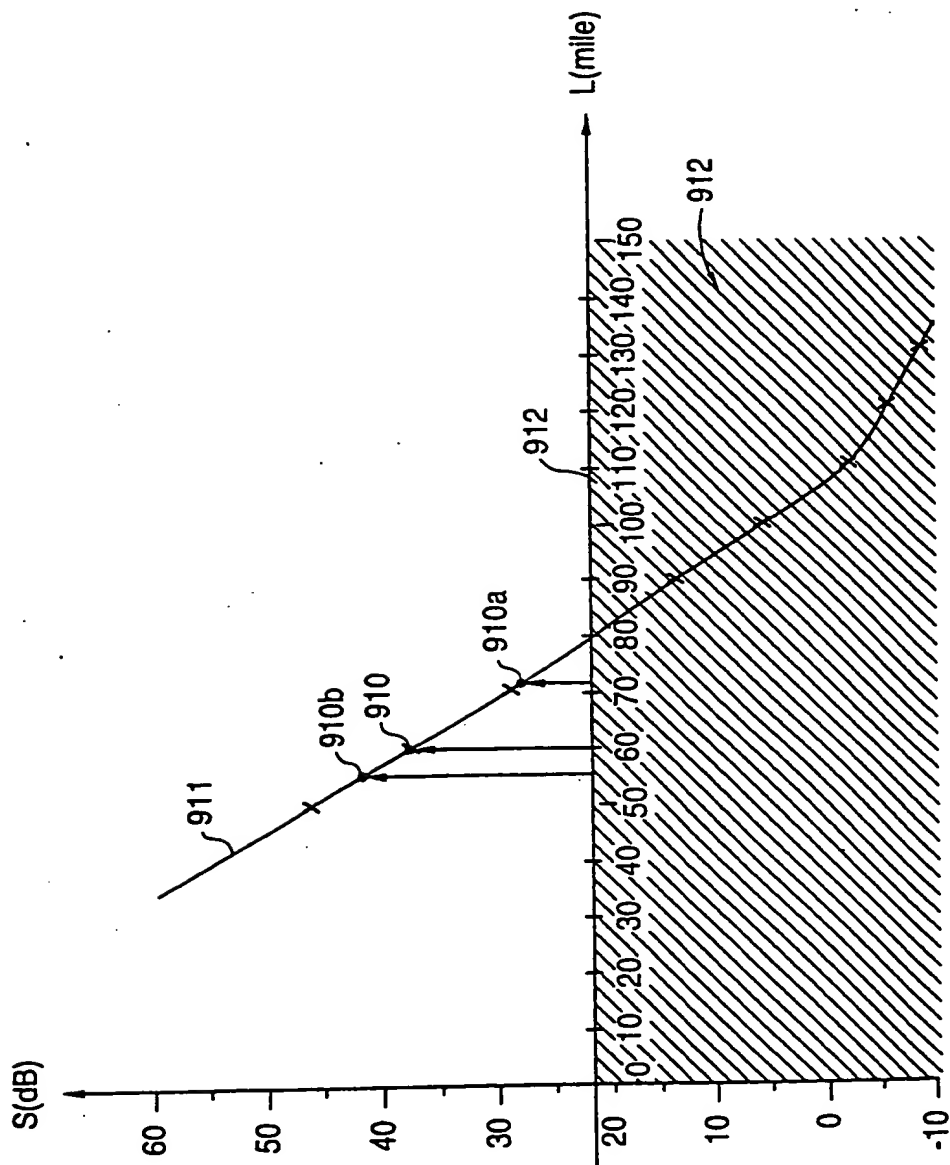


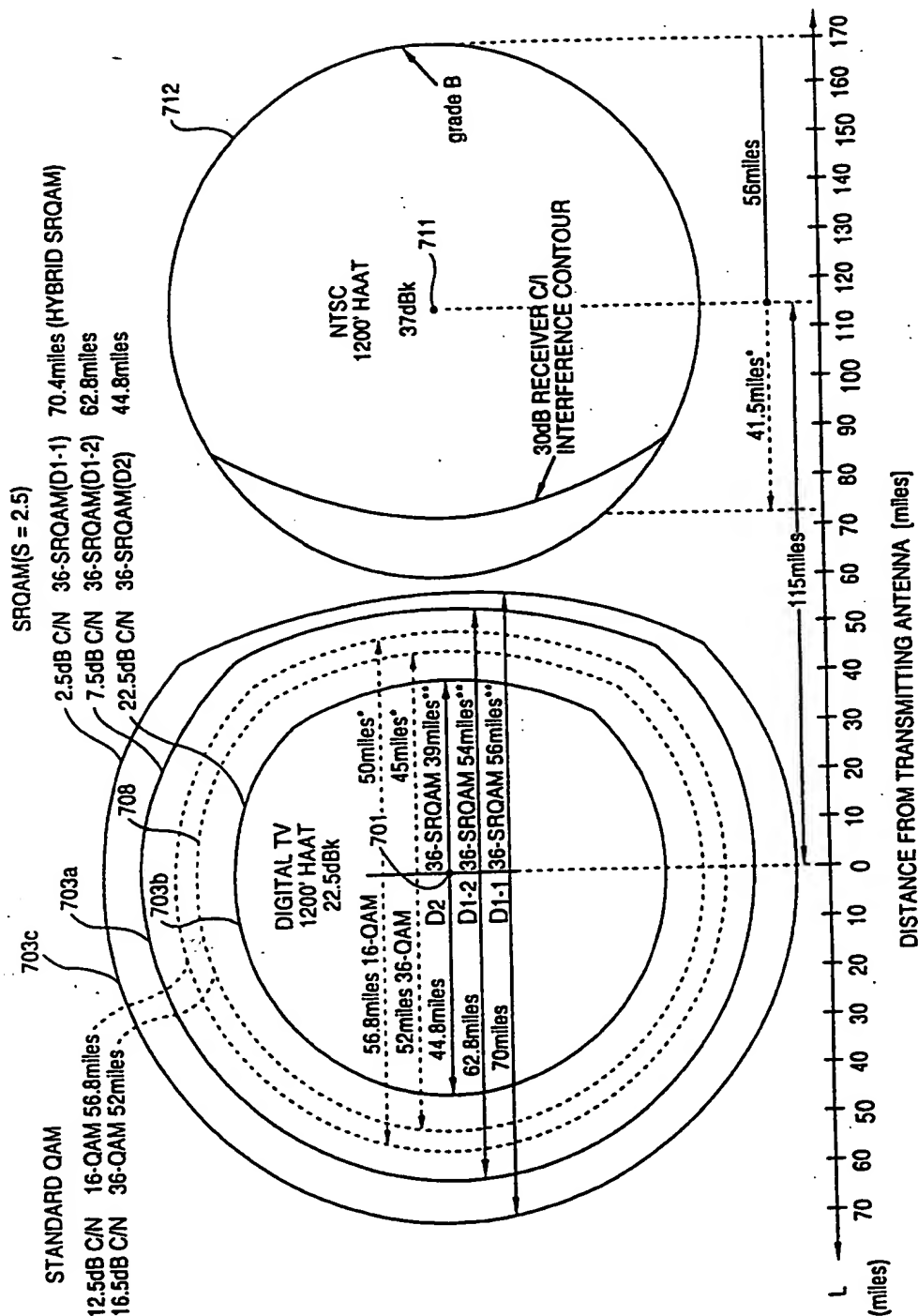


FIG. 105



OIPF
OCT 24 2002
FEDERAL BUREAU OF INVESTIGATION

FIG. 106



O I P E J C
OCT 24 2002
PATENT & TRADEMARK

FIG. 107

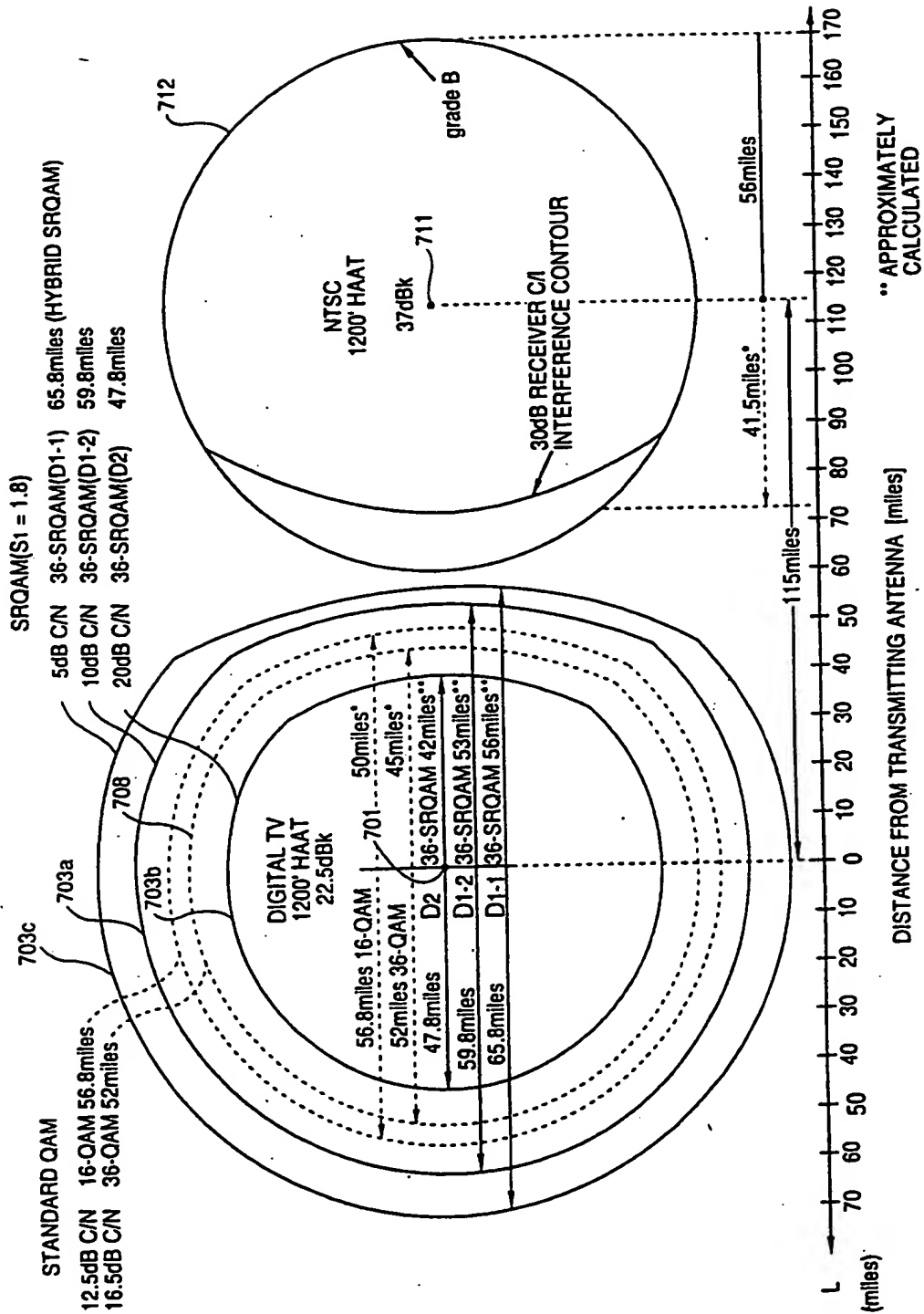




FIG. 108(a)

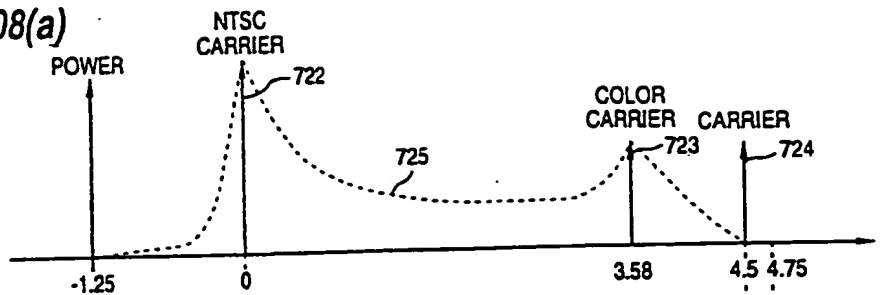


FIG. 108(b)

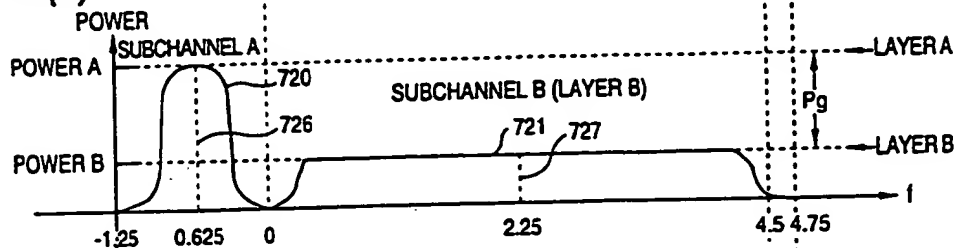


FIG. 108(c)

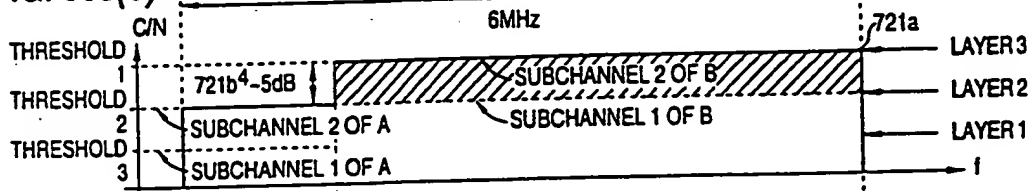


FIG. 108(d)

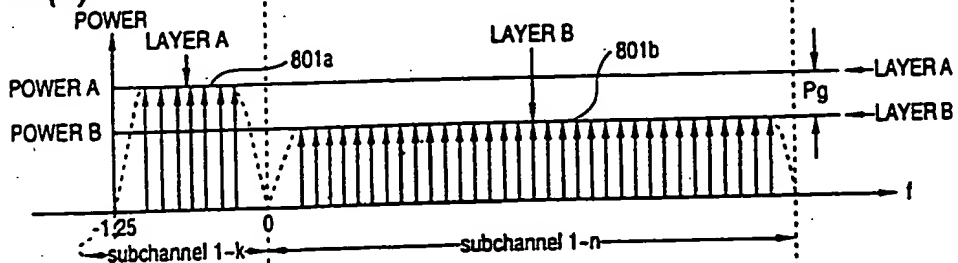
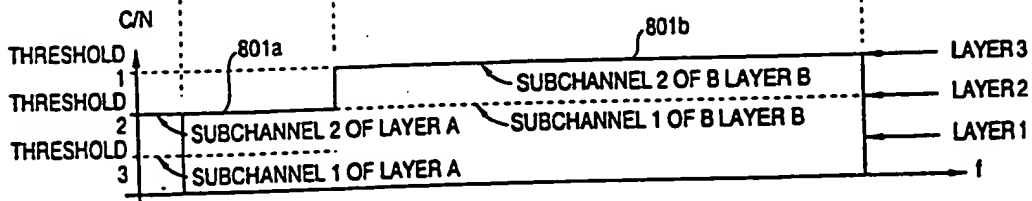


FIG. 108(e)



O I P E J C B
OCT 24 2002
PATENT & TRADEMARK

U.S. Patent

Feb. 4, 1997

Sheet 108 of 178

5,600,672

FIG. 109

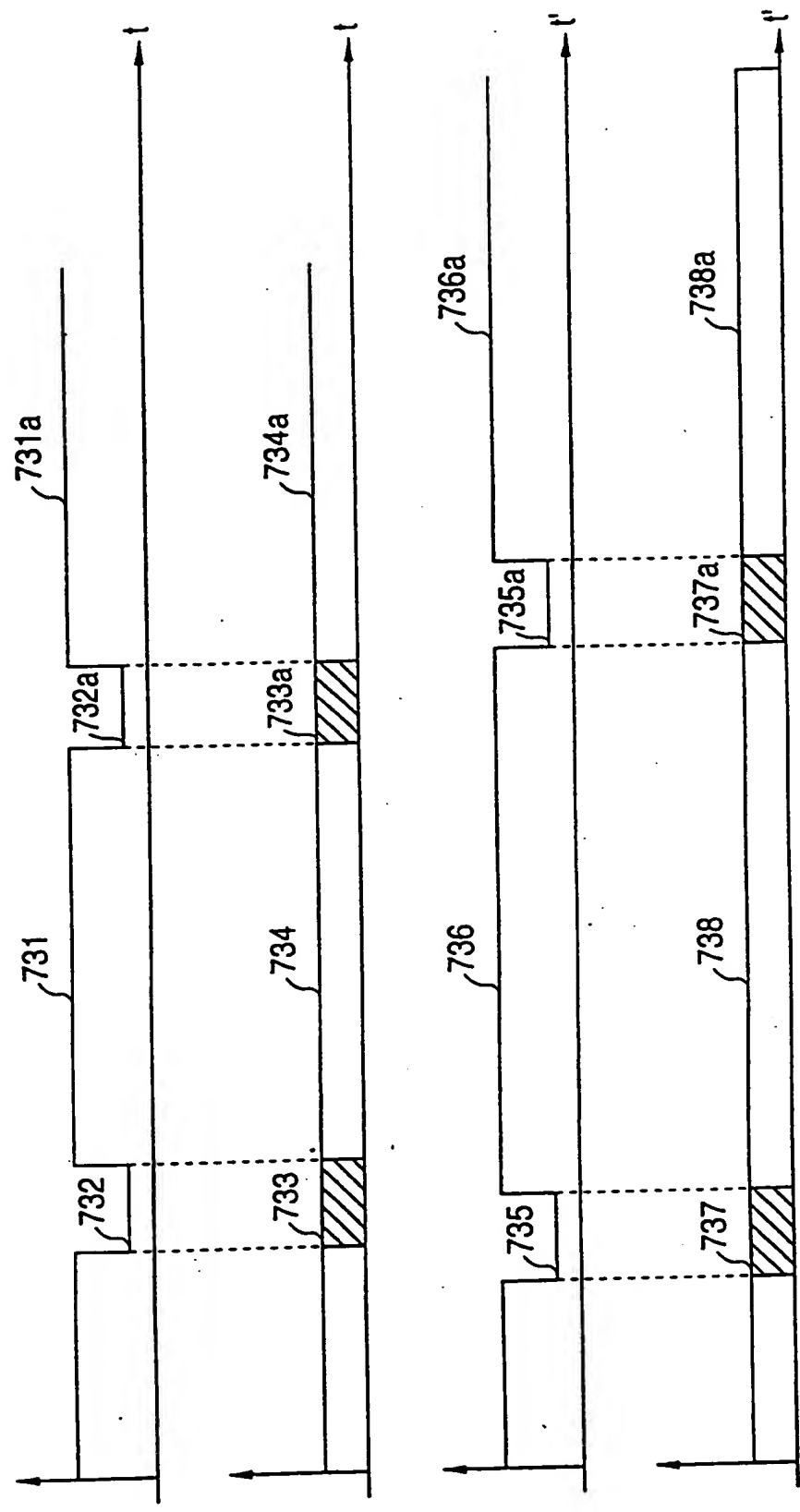


FIG. 110

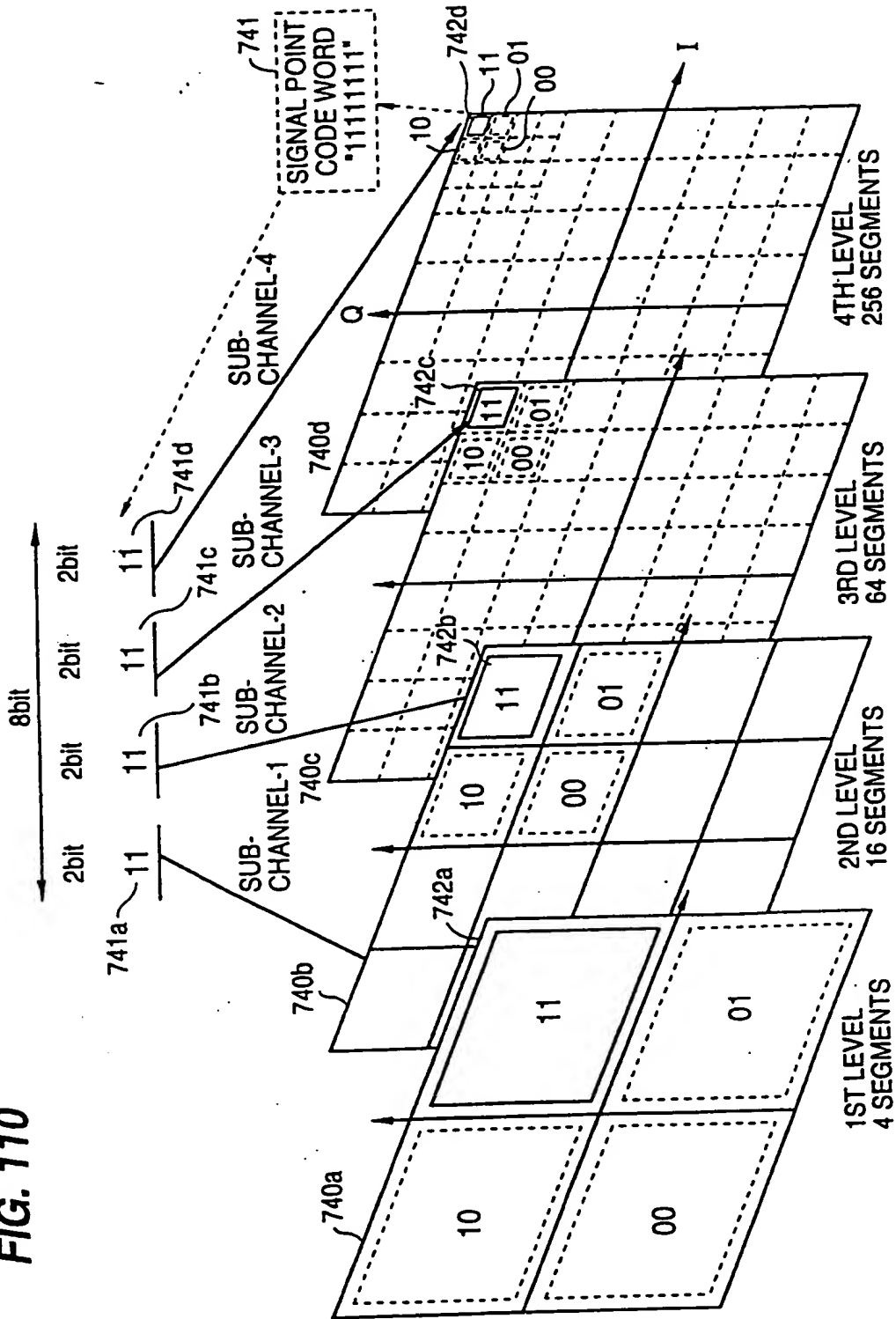
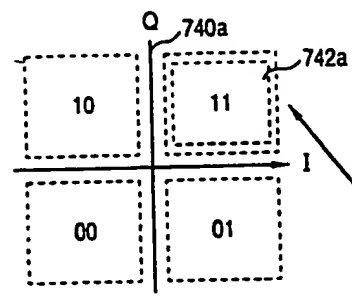




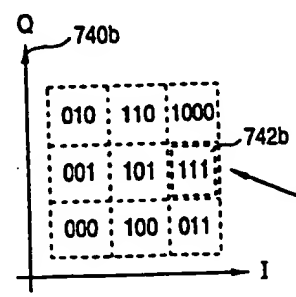
FIG. 111

SUBCHANNEL-1 (SRQAM:D1 = 2bit)



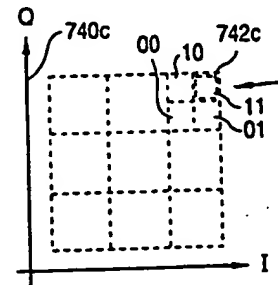
CODE WORD-1

SUBCHANNEL-2 (36-SRQAM:D2 = 3bit + 1/8bit)



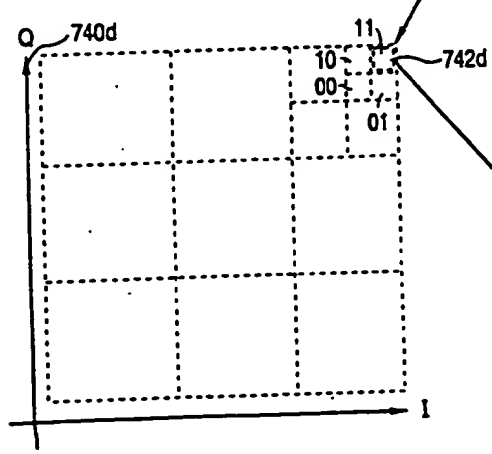
CODE WORD-2

SUBCHANNEL-3 (144-SRQAM:D3 = 2bit)



CODE WORD-3

SUBCHANNEL-4 (576-SRQAM:D4 = 2bit)



CODE WORD-4

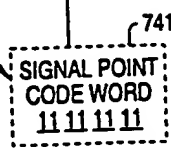
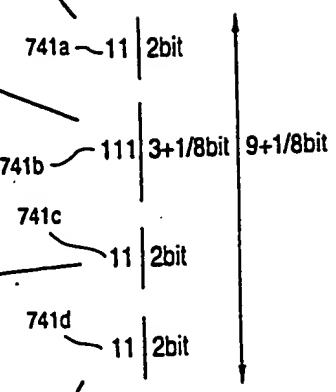
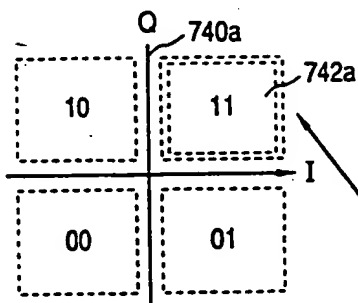


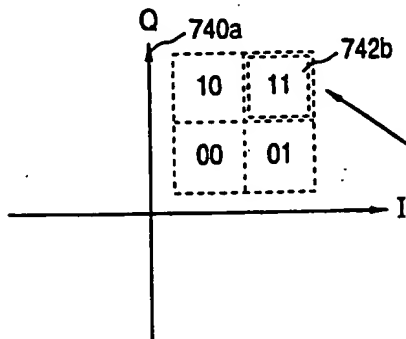


FIG. 112

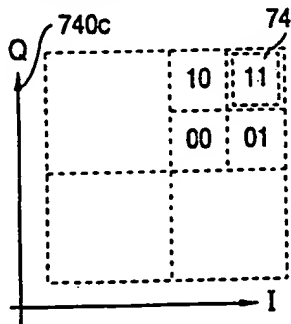
SUBCHANNEL-1 (SRQAM:D1 = 2bit)



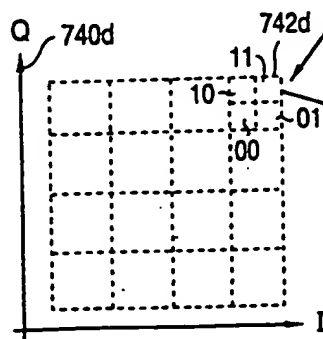
SUBCHANNEL-2 (16-SRQAM:D2 = 2bit)



SUBCHANNEL-3 (64-SRQAM:D3 = 2bit)



SUBCHANNEL-4 (256-SRQAM:D4 = 2bit)



CODE WORD-1

CODE WORD-2

CODE WORD-3

CODE WORD-4

741a ~ 11 2bit

741b 11 2bit

11 2bit

741c 11 2bit

11 2bit

741d 11 2bit

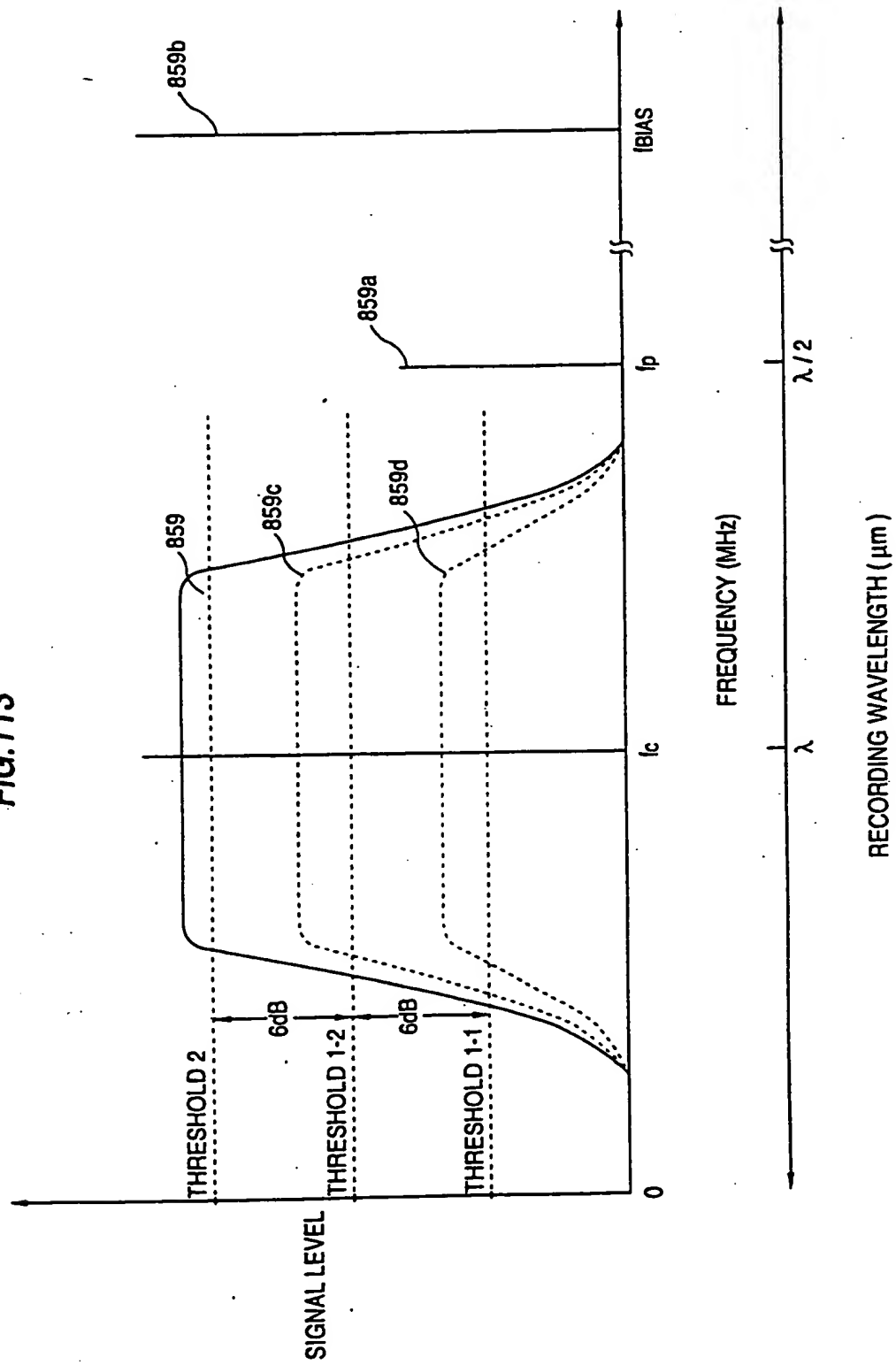
8bit

SIGNAL POINT
CODE WORD
11 11 11 11

741



FIG. 113



MAGNETIC RECORDING / PLAYBACK APPARATUS

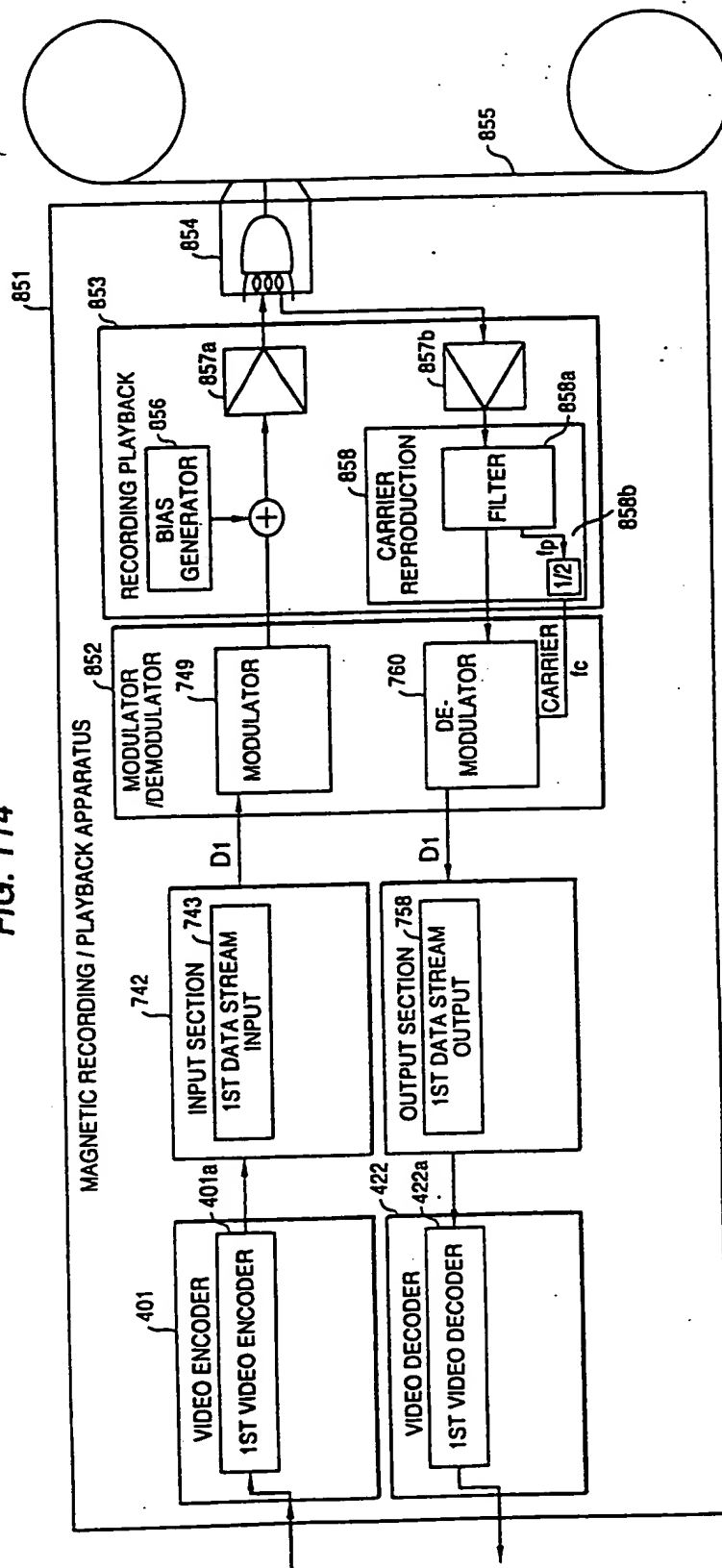
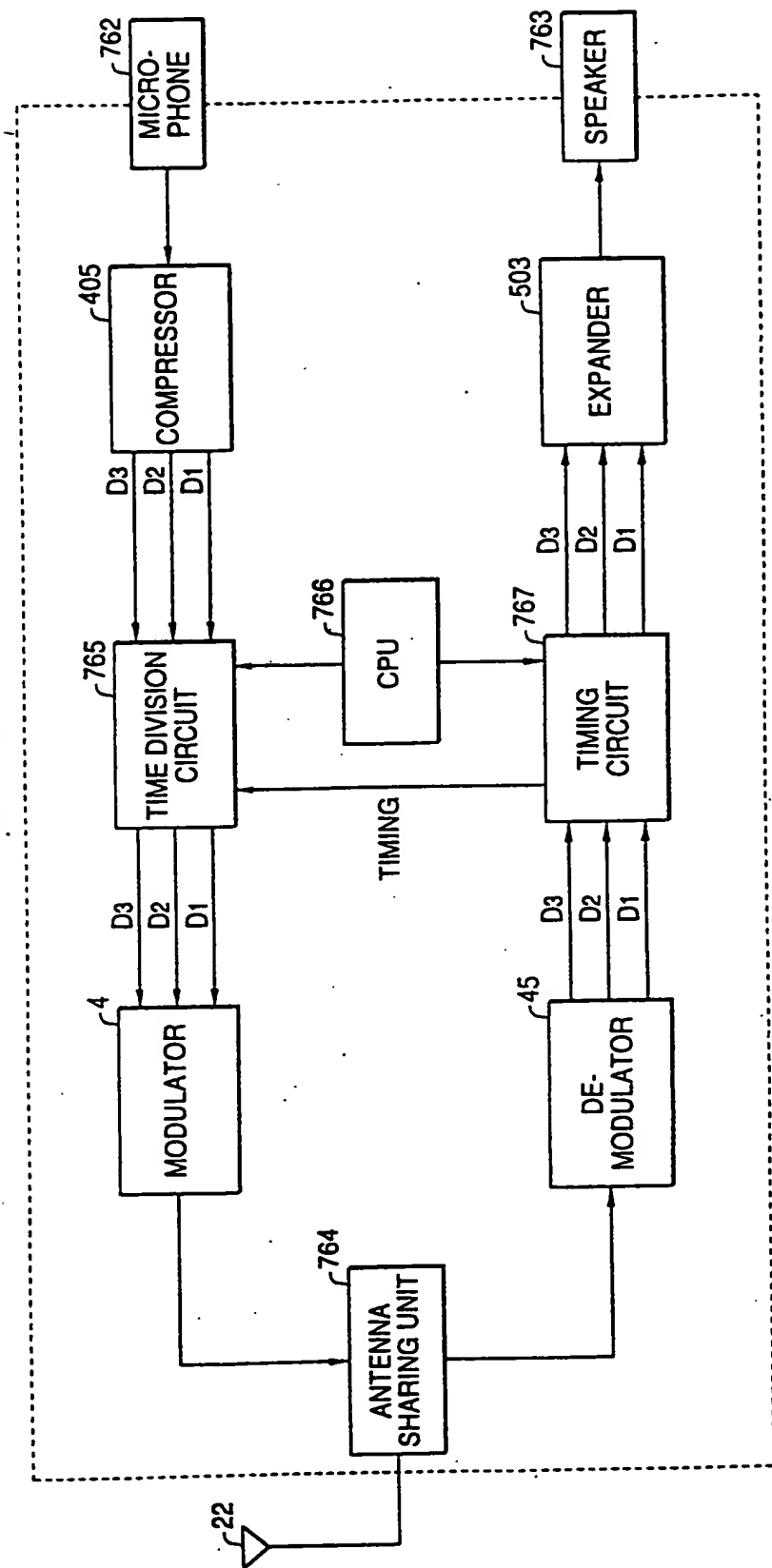




FIG. 115



O I P E J C
OCT 24 2002
PATENT & TRADEMARK

FIG. 116

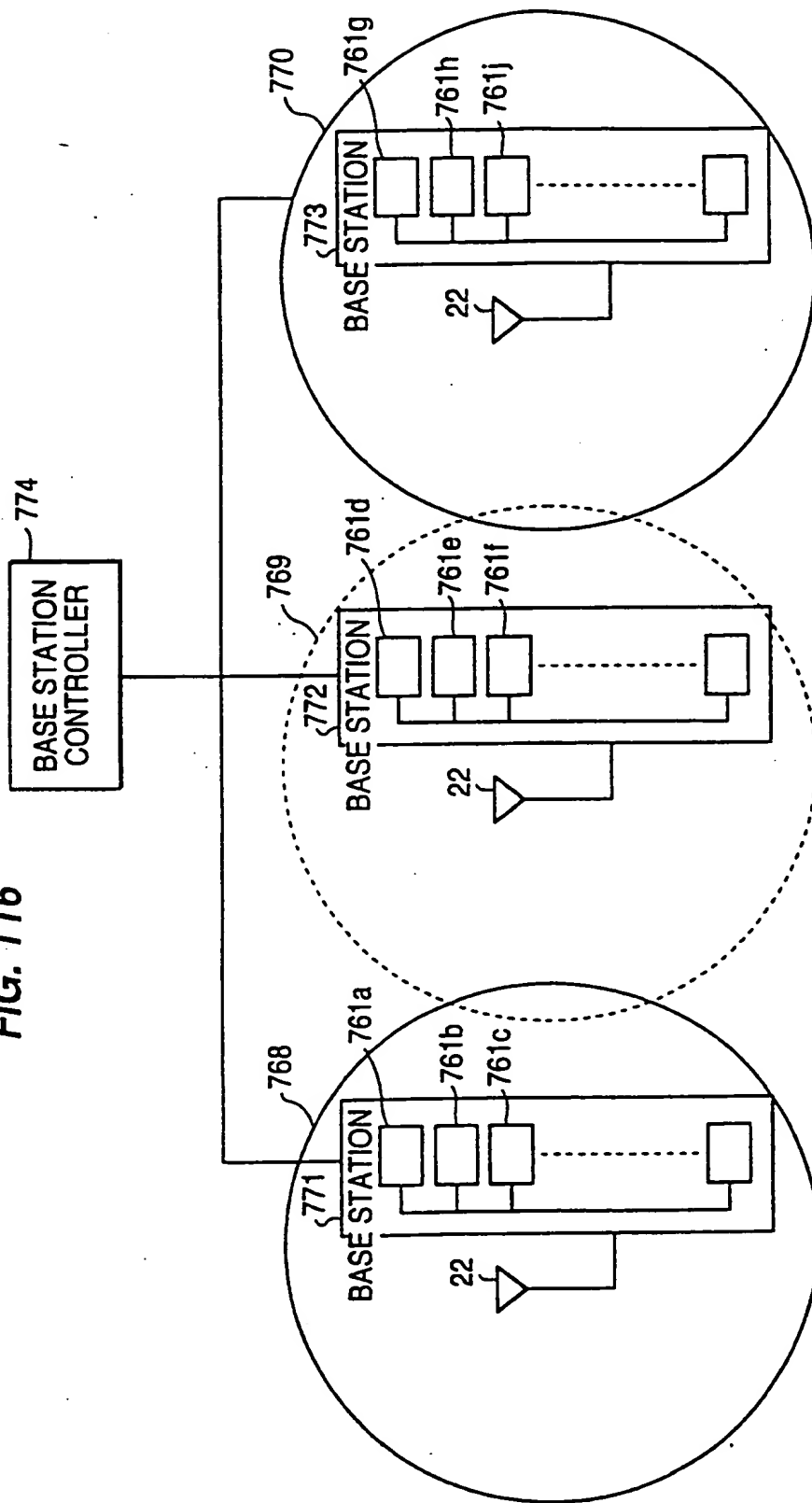




FIG. 117

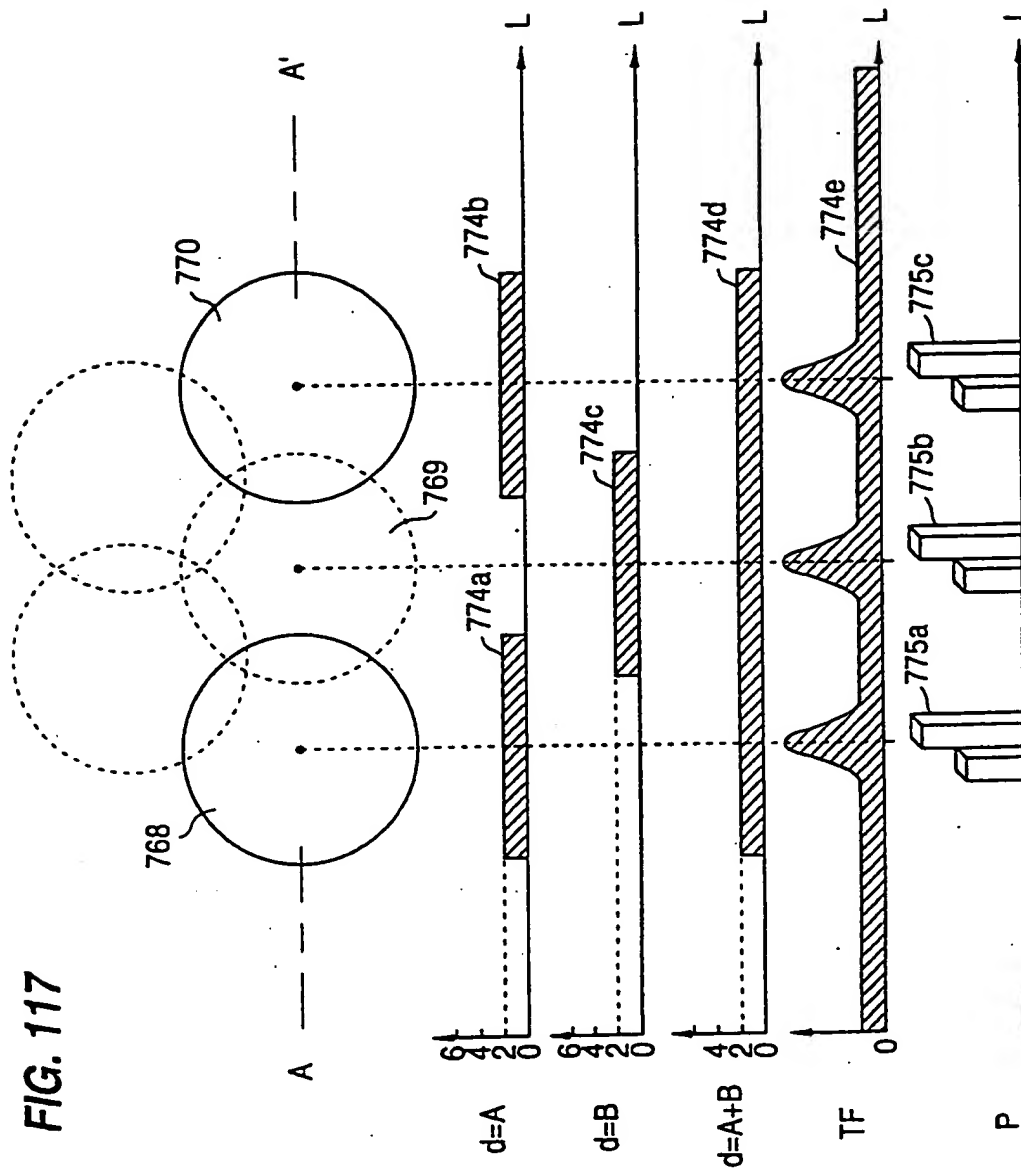


FIG. 118

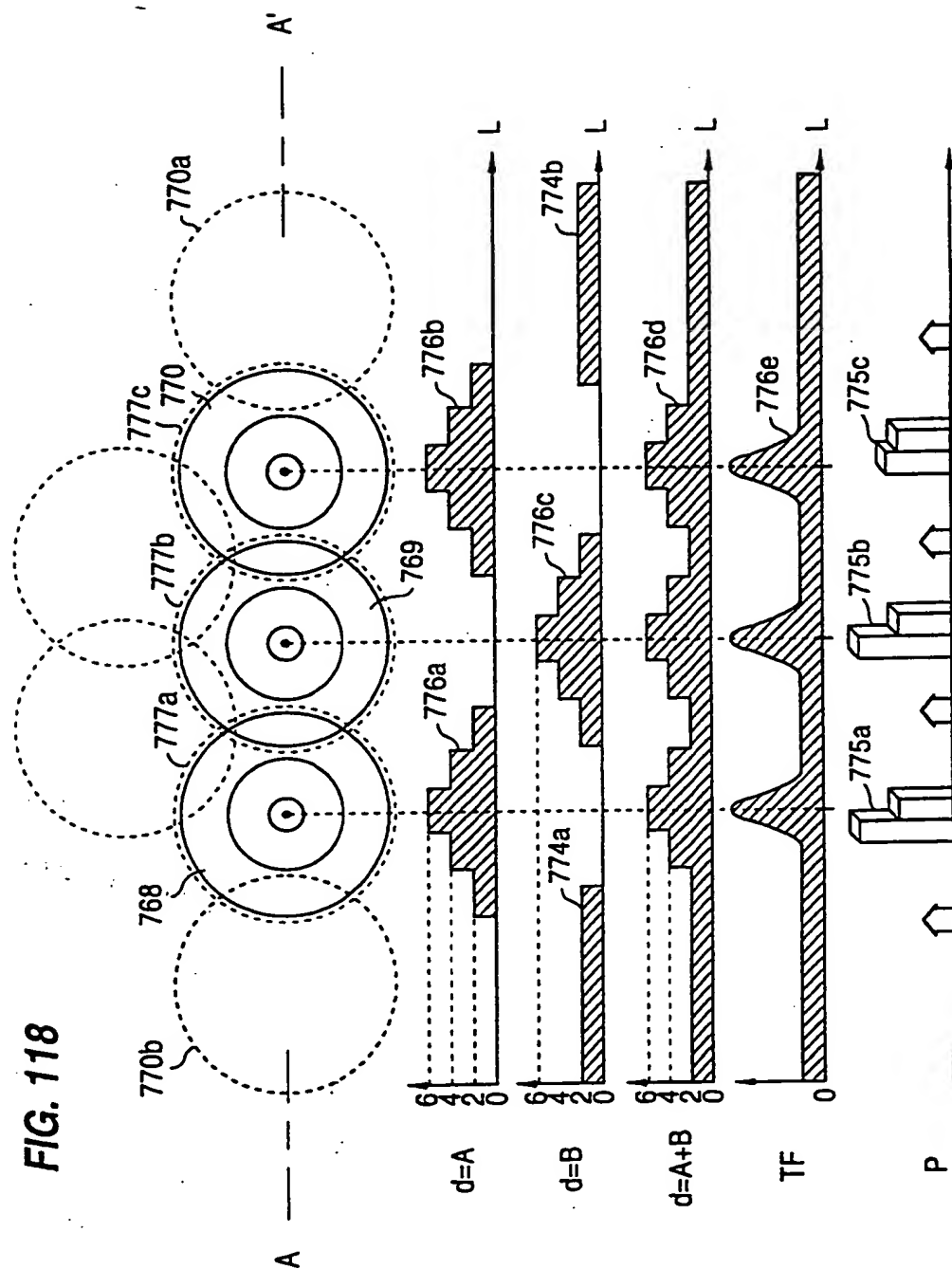




FIG. 119(a)

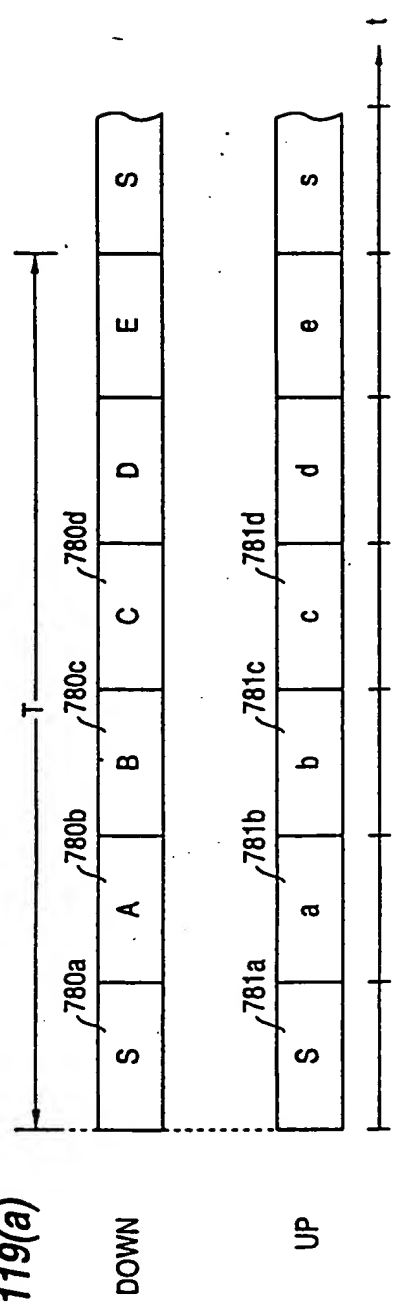


FIG. 119(b)

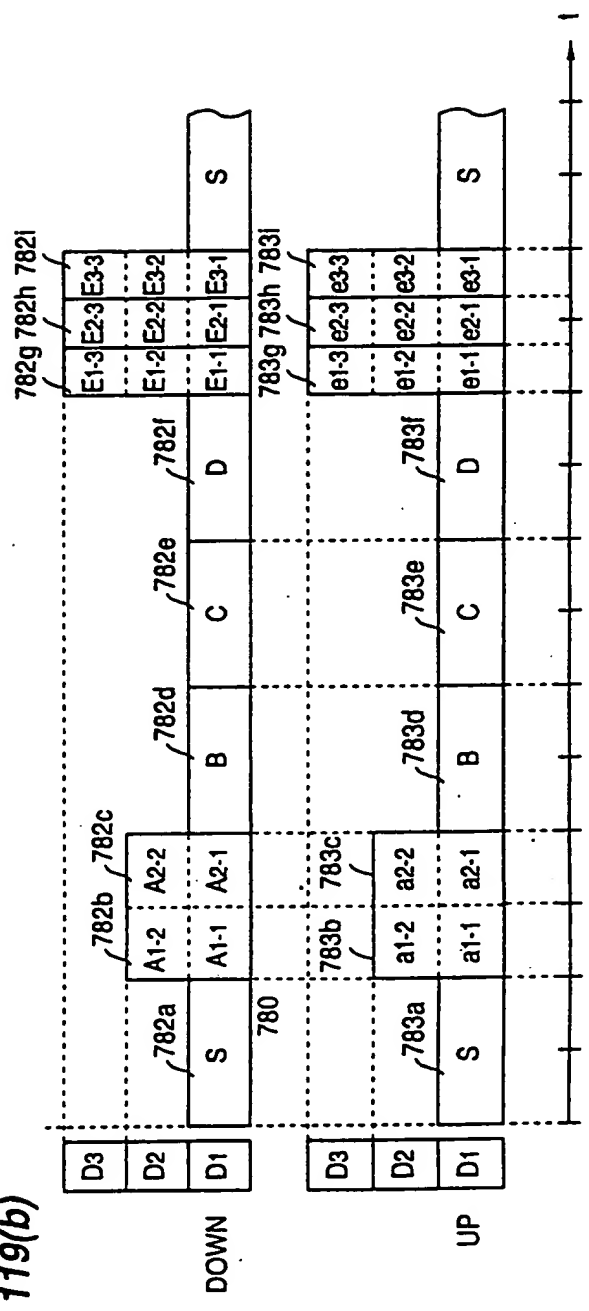




FIG. 120(a)

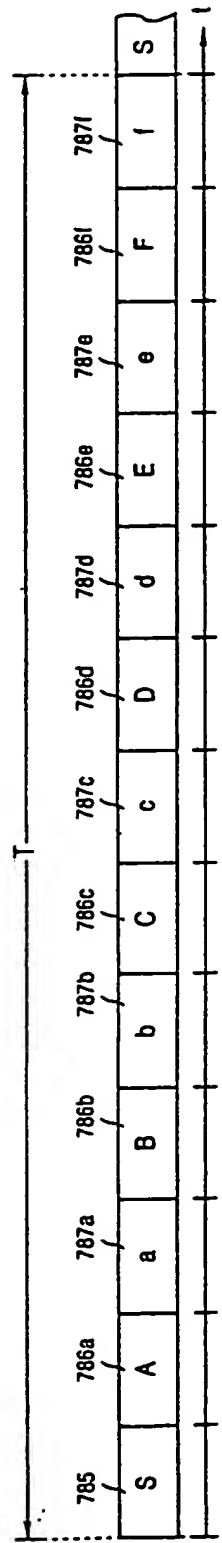


FIG. 120(b)

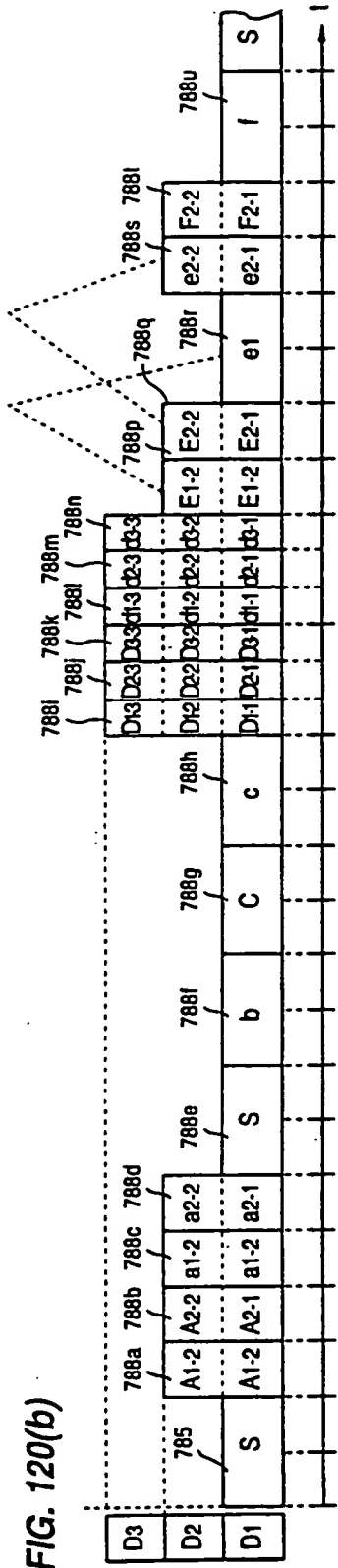




FIG. 121

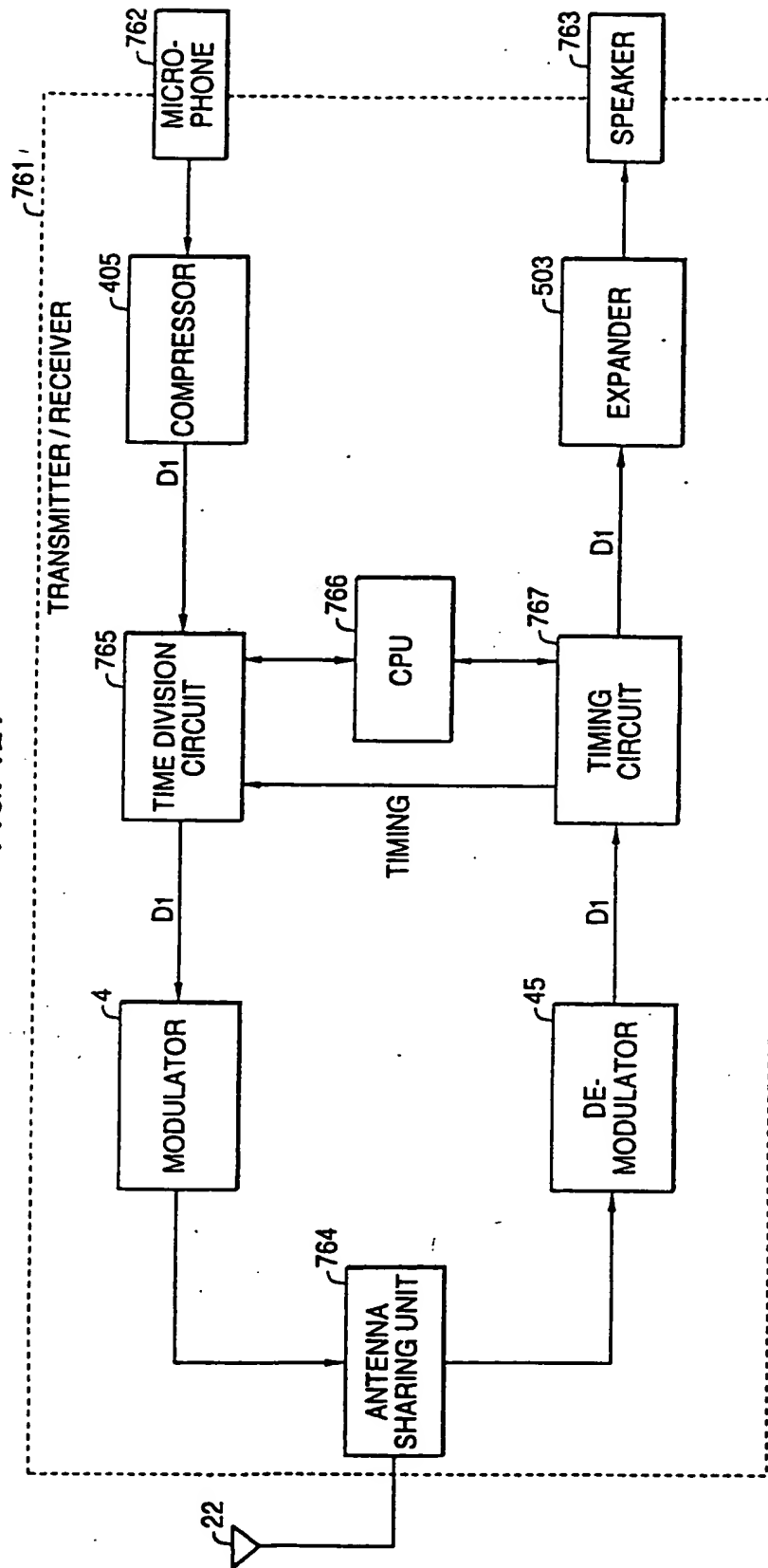




FIG. 122

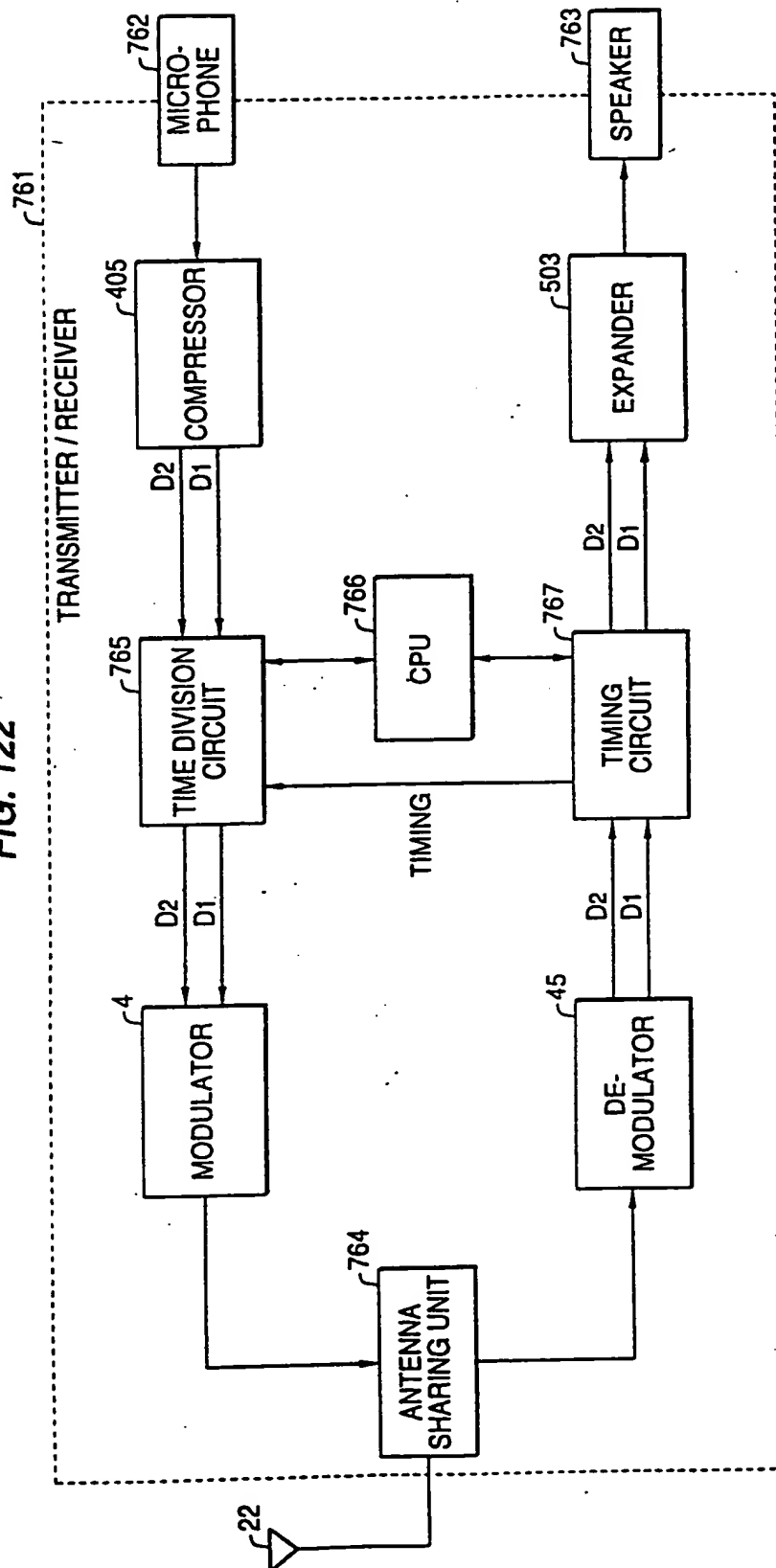
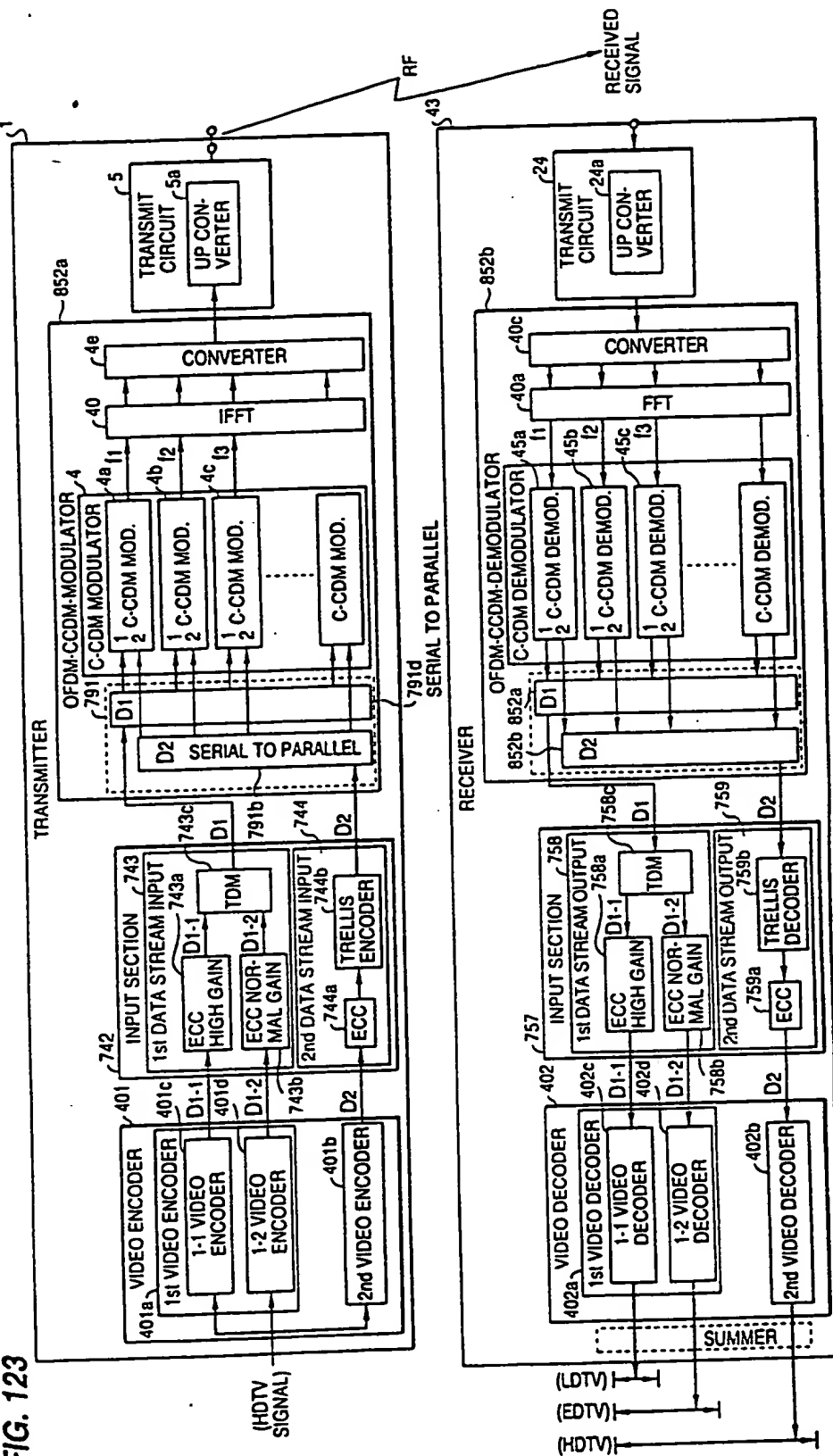




FIG. 123



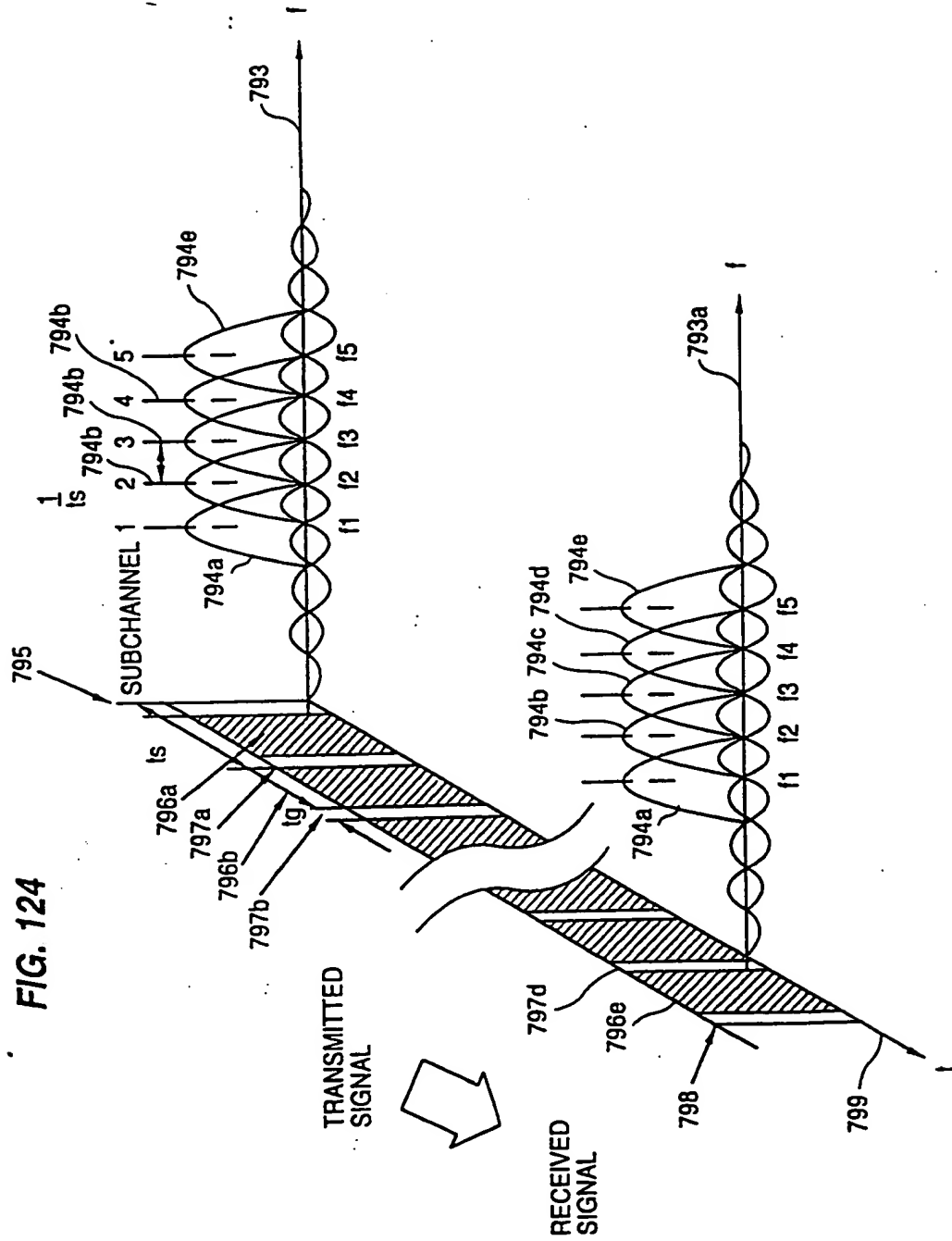




FIG. 125(a)

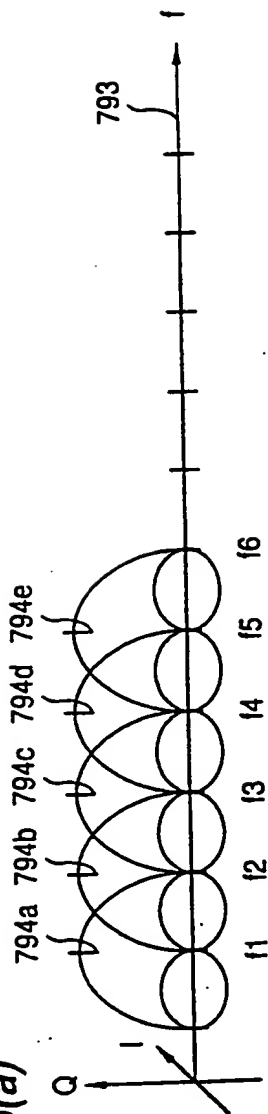
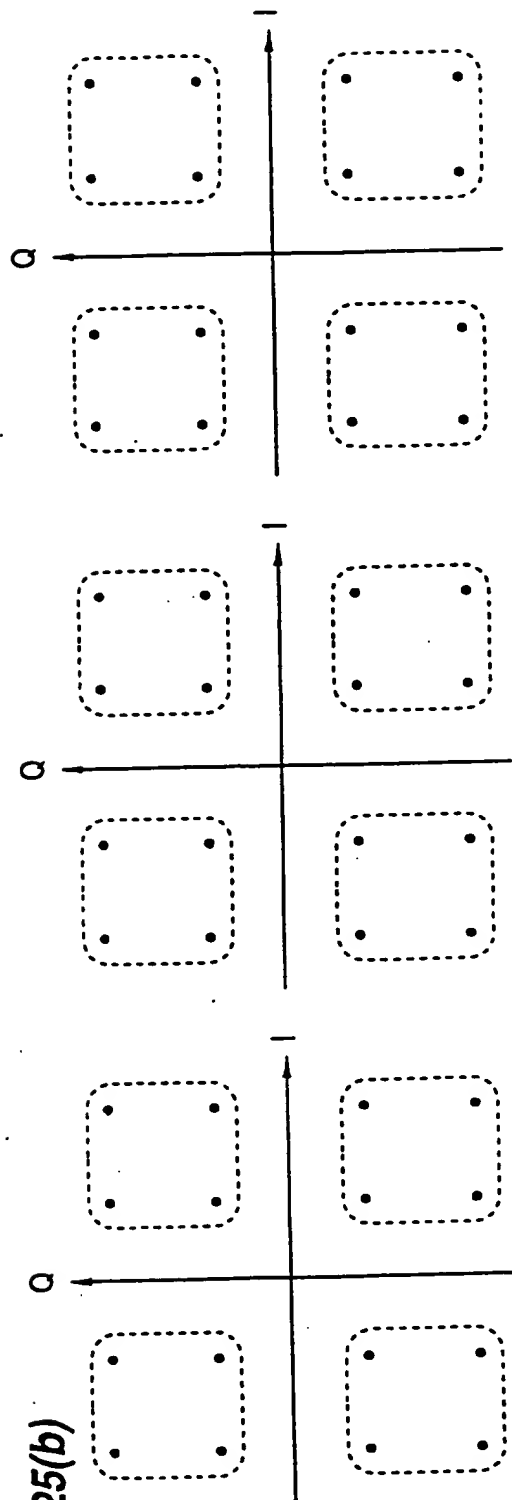


FIG. 125(b)



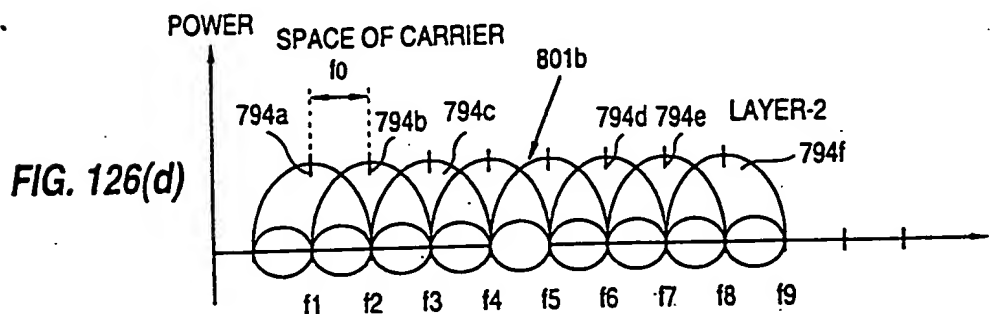
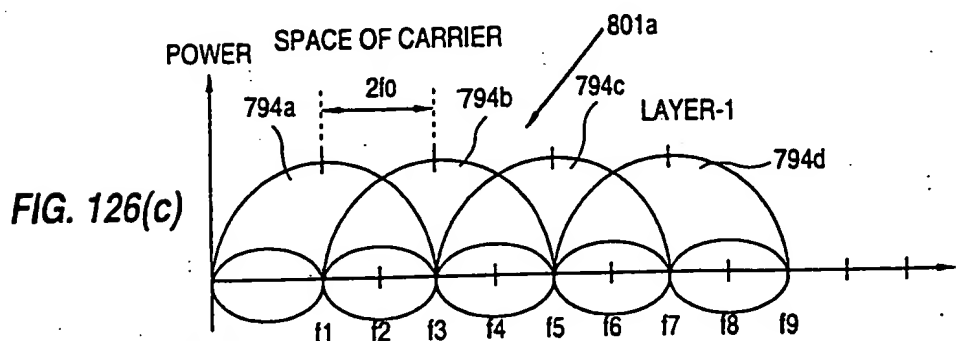
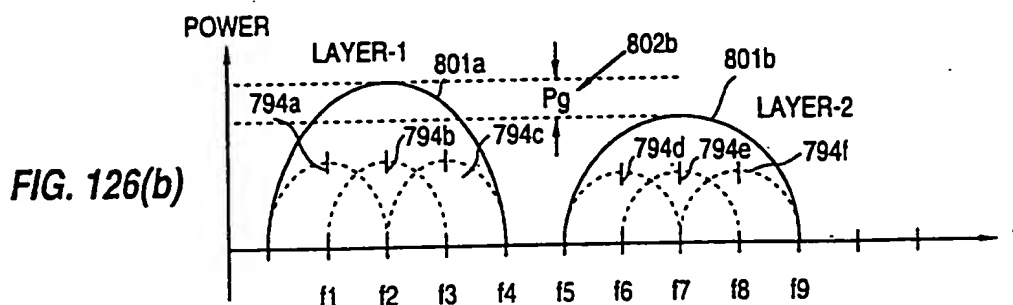
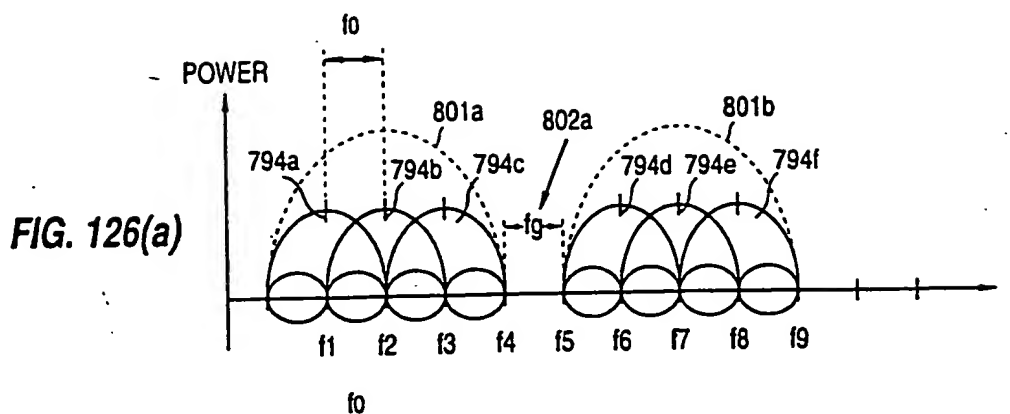




FIG. 127

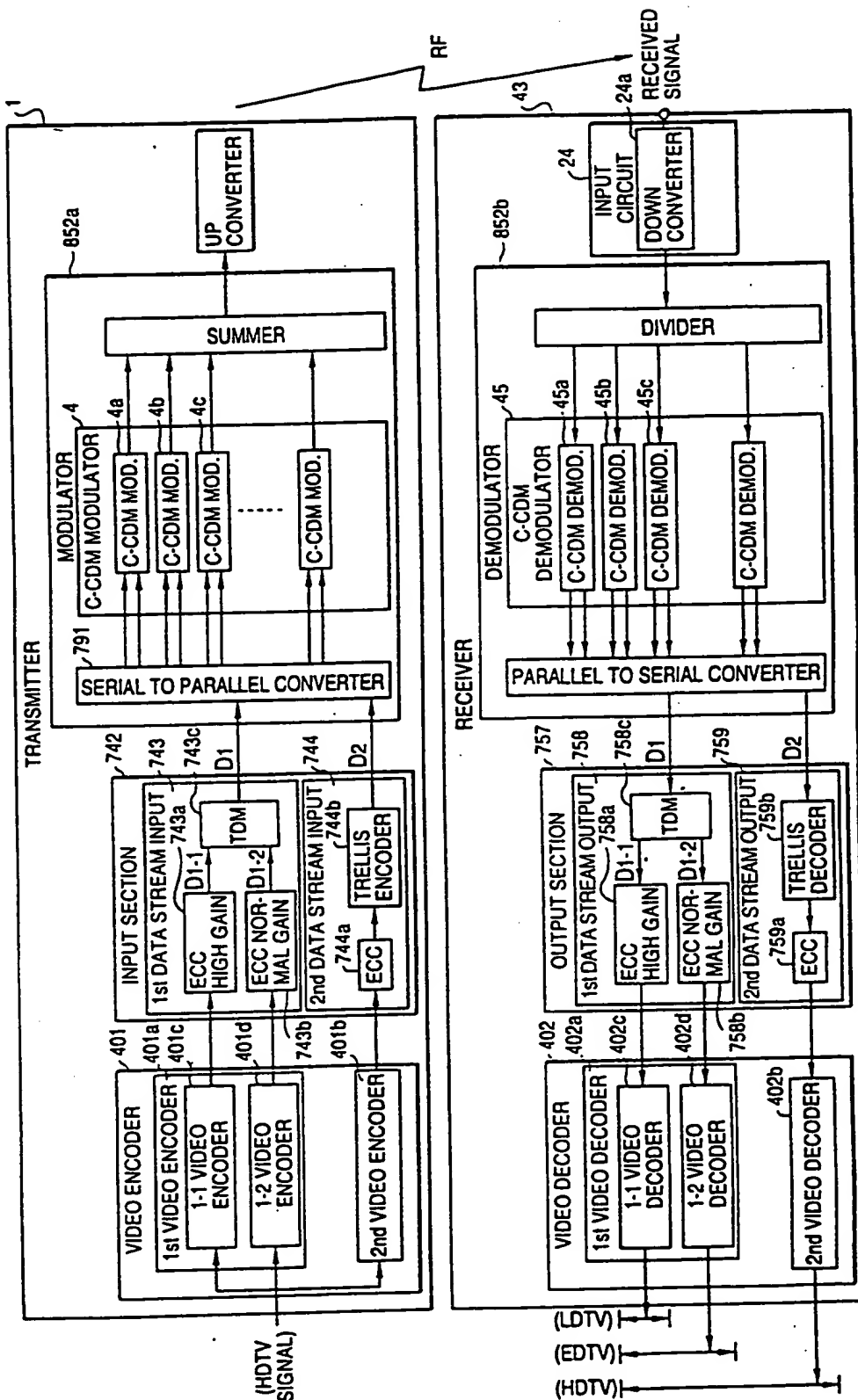




FIG. 128(a)

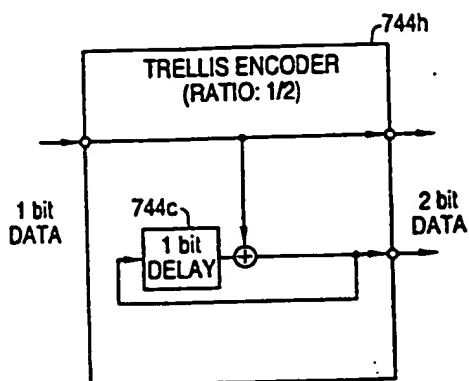


FIG. 128(d)

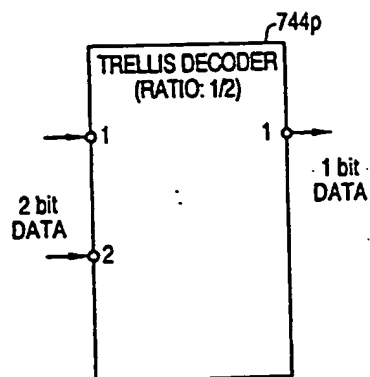


FIG. 128(b)

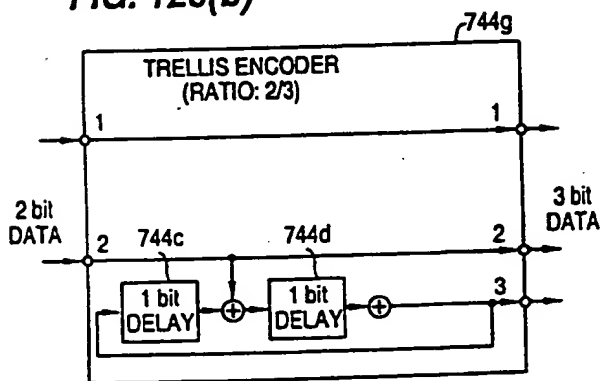


FIG. 128(e)

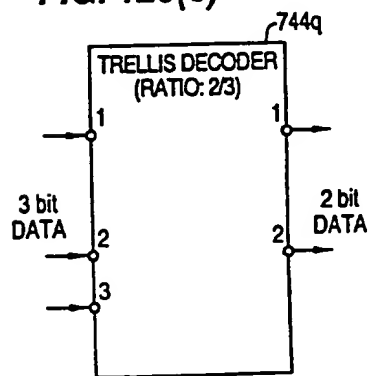


FIG. 128(c)

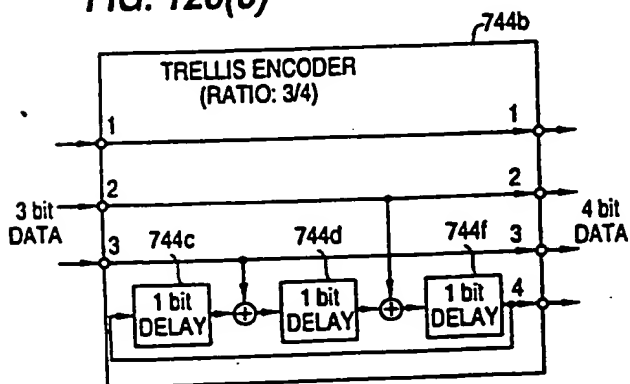


FIG. 128(f)

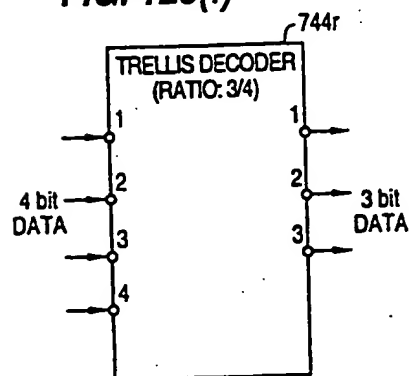




FIG. 129

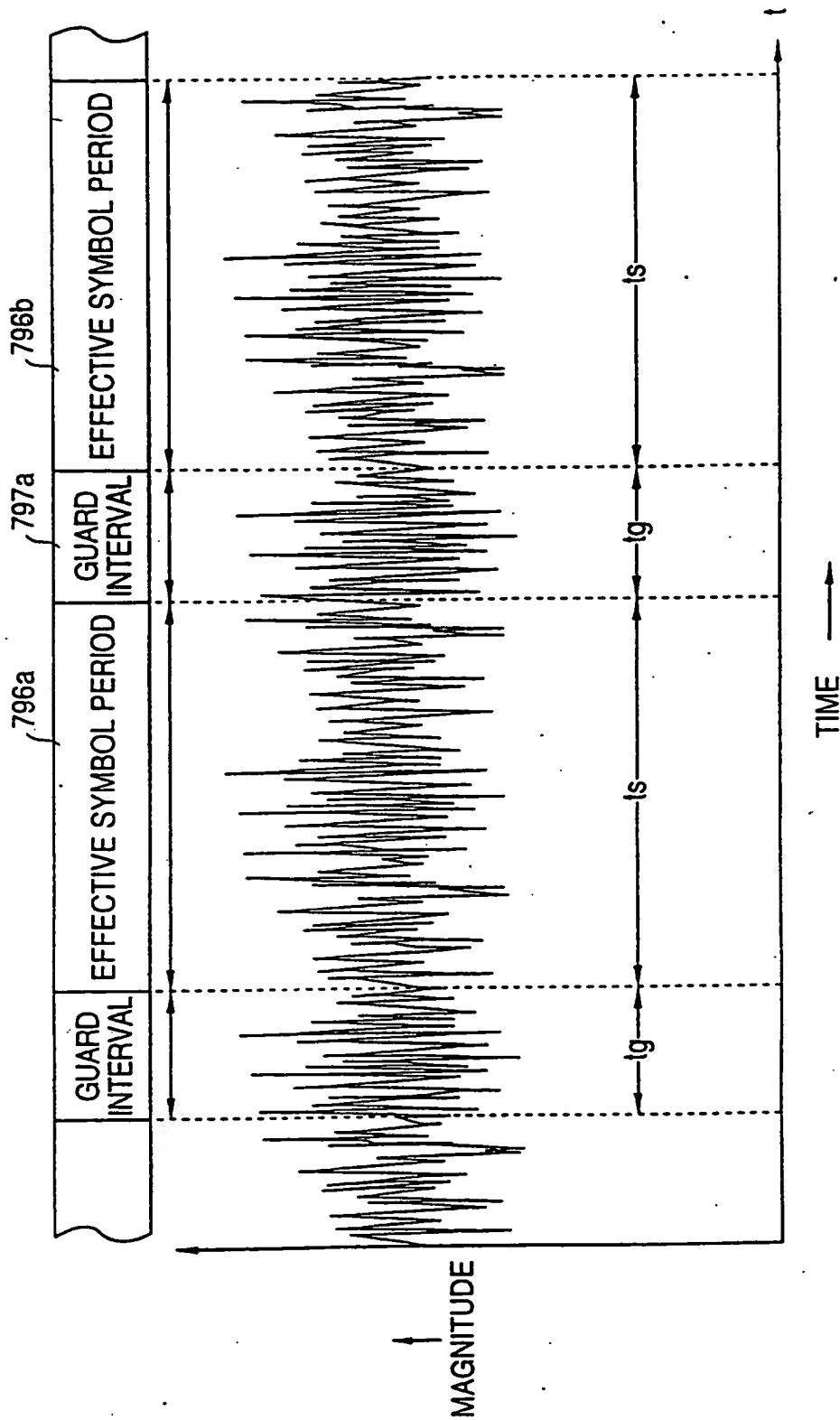




FIG. 130

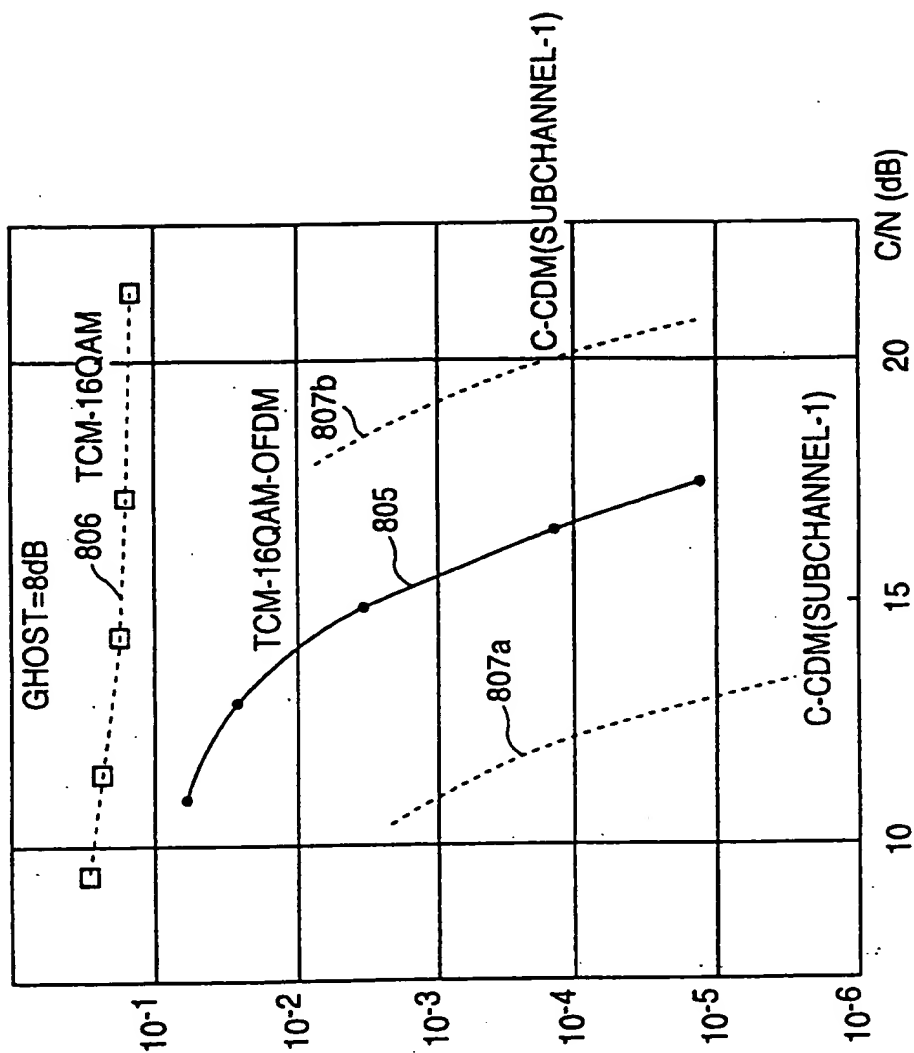


FIG. 131

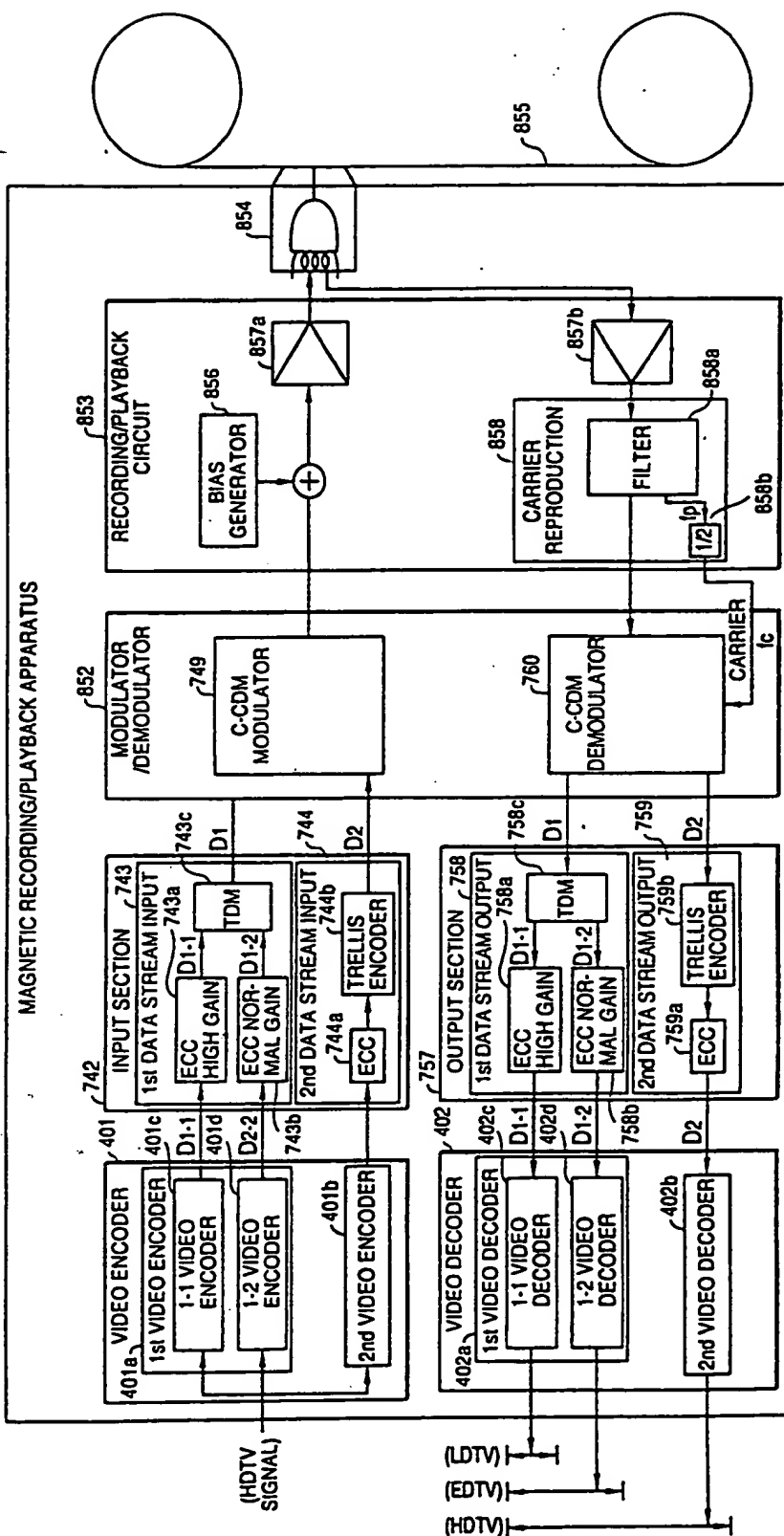




FIG. 133

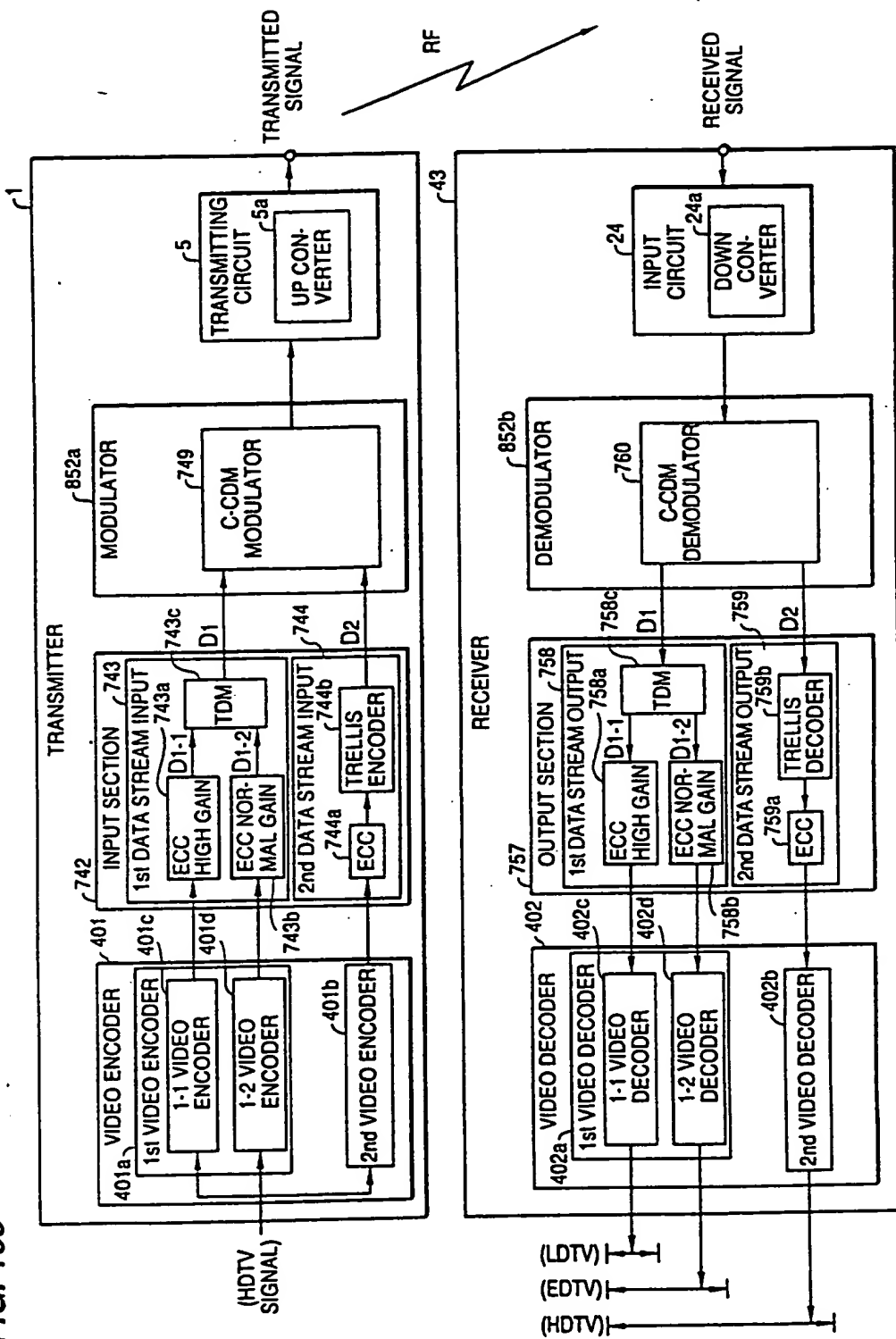


FIG. 134

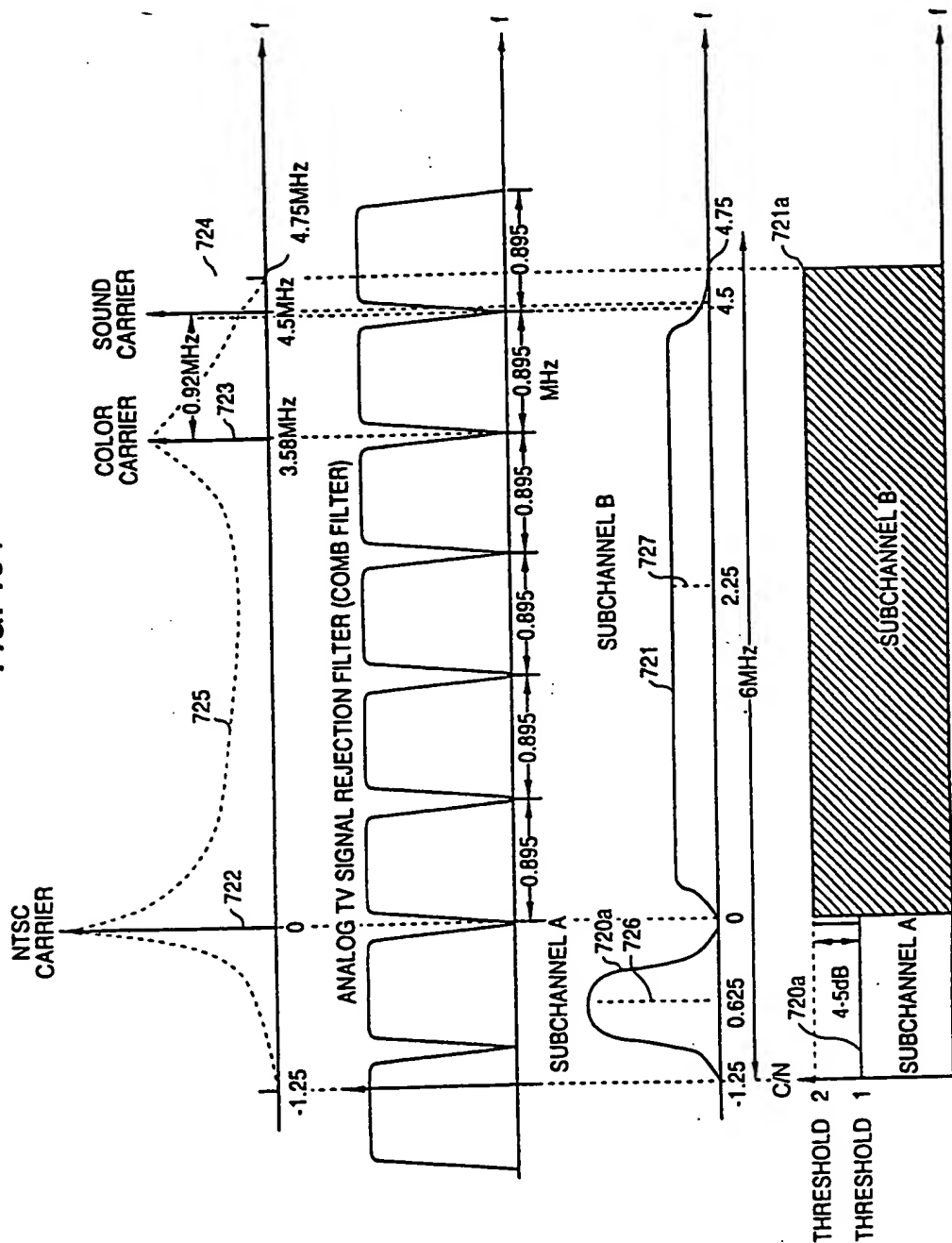




FIG. 135

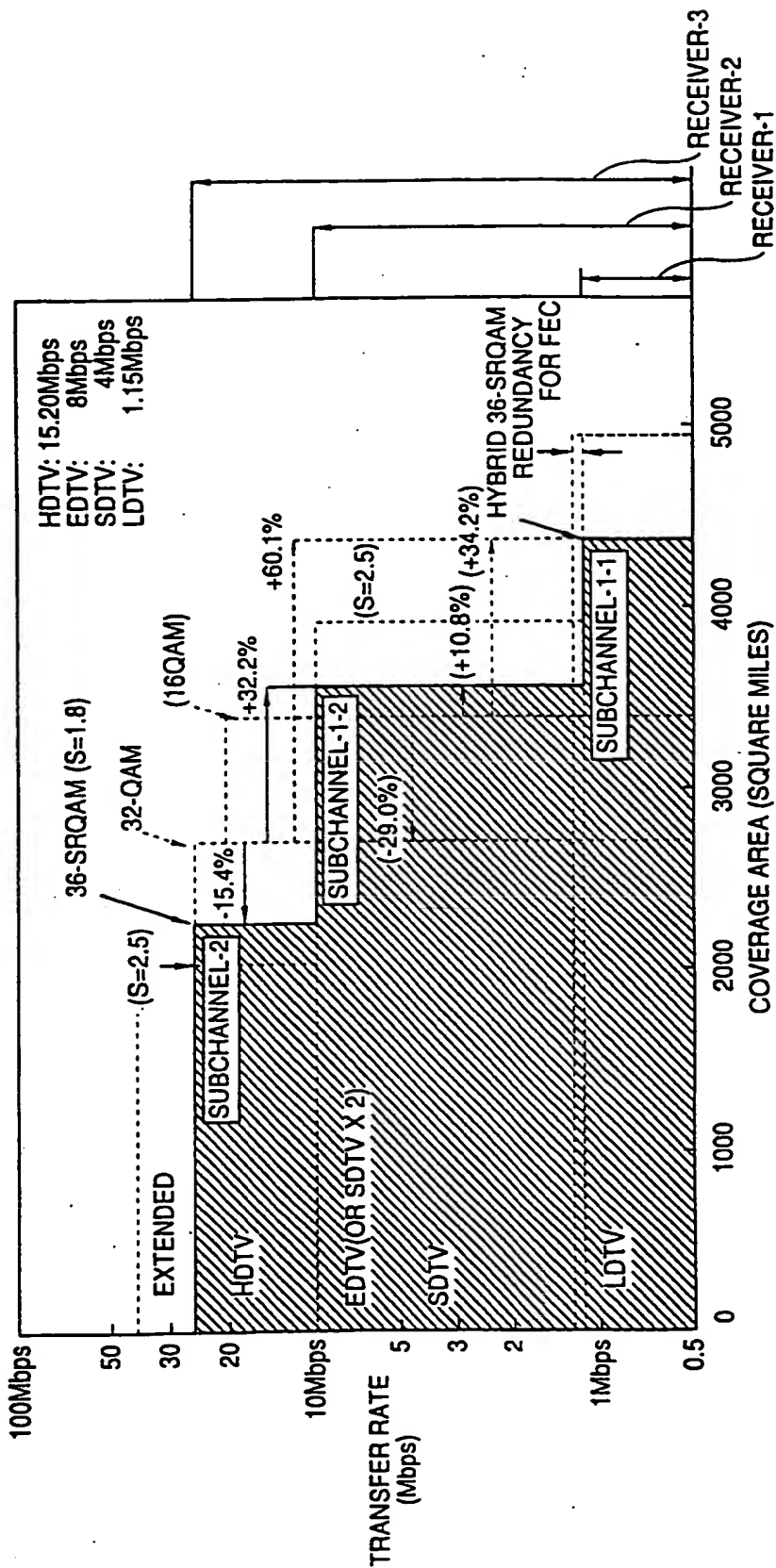


FIG. 136

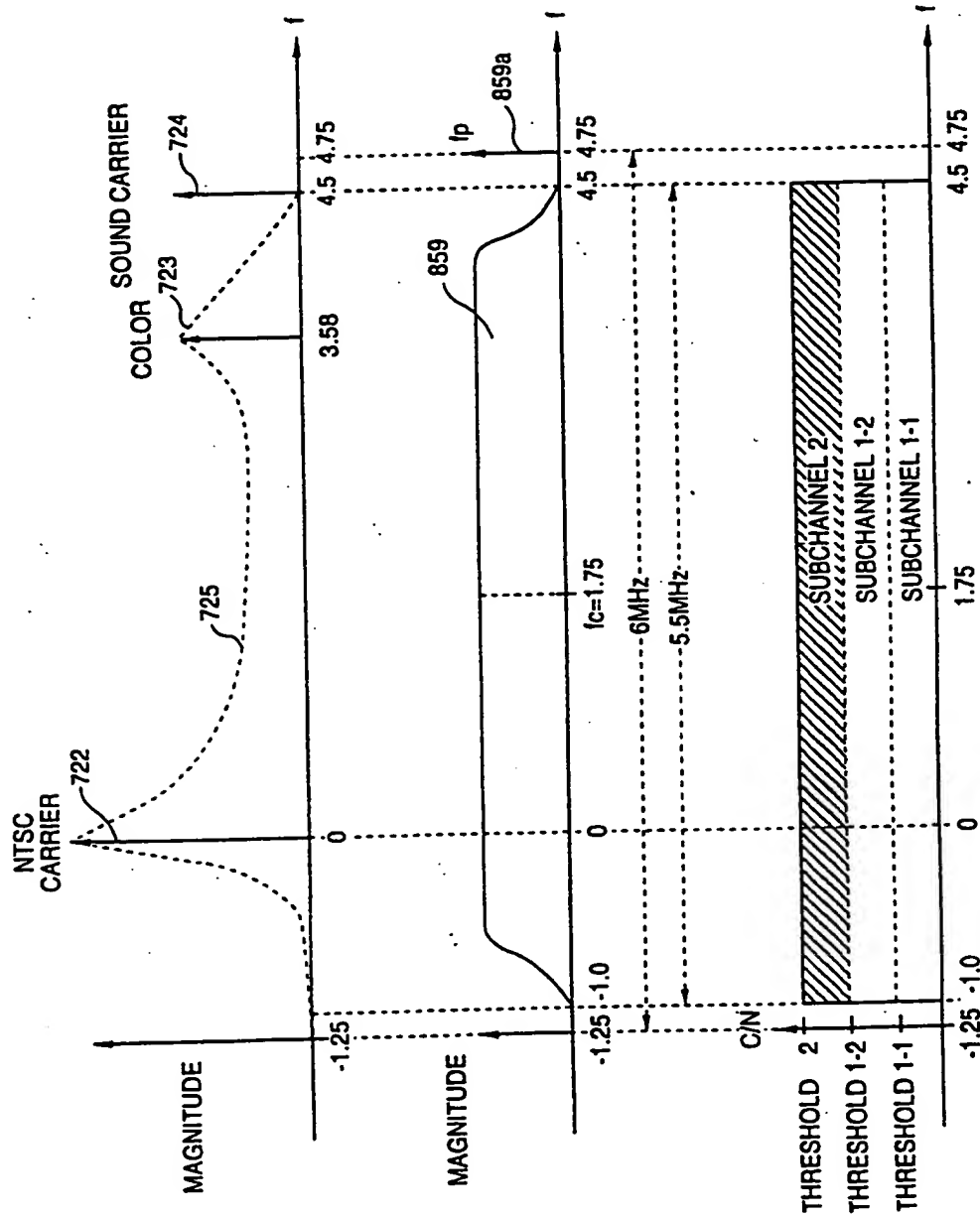




FIG. 137

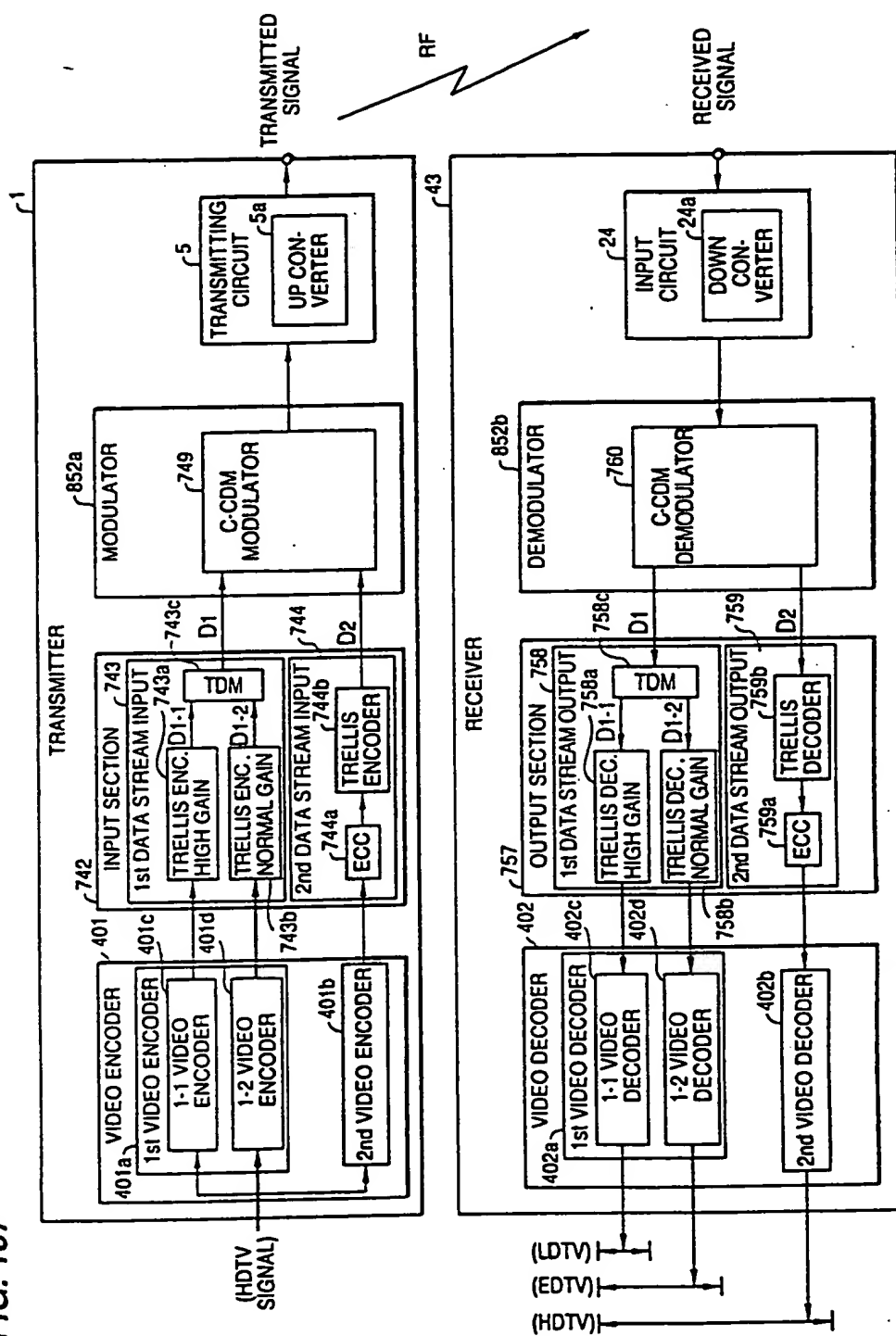


FIG. 138

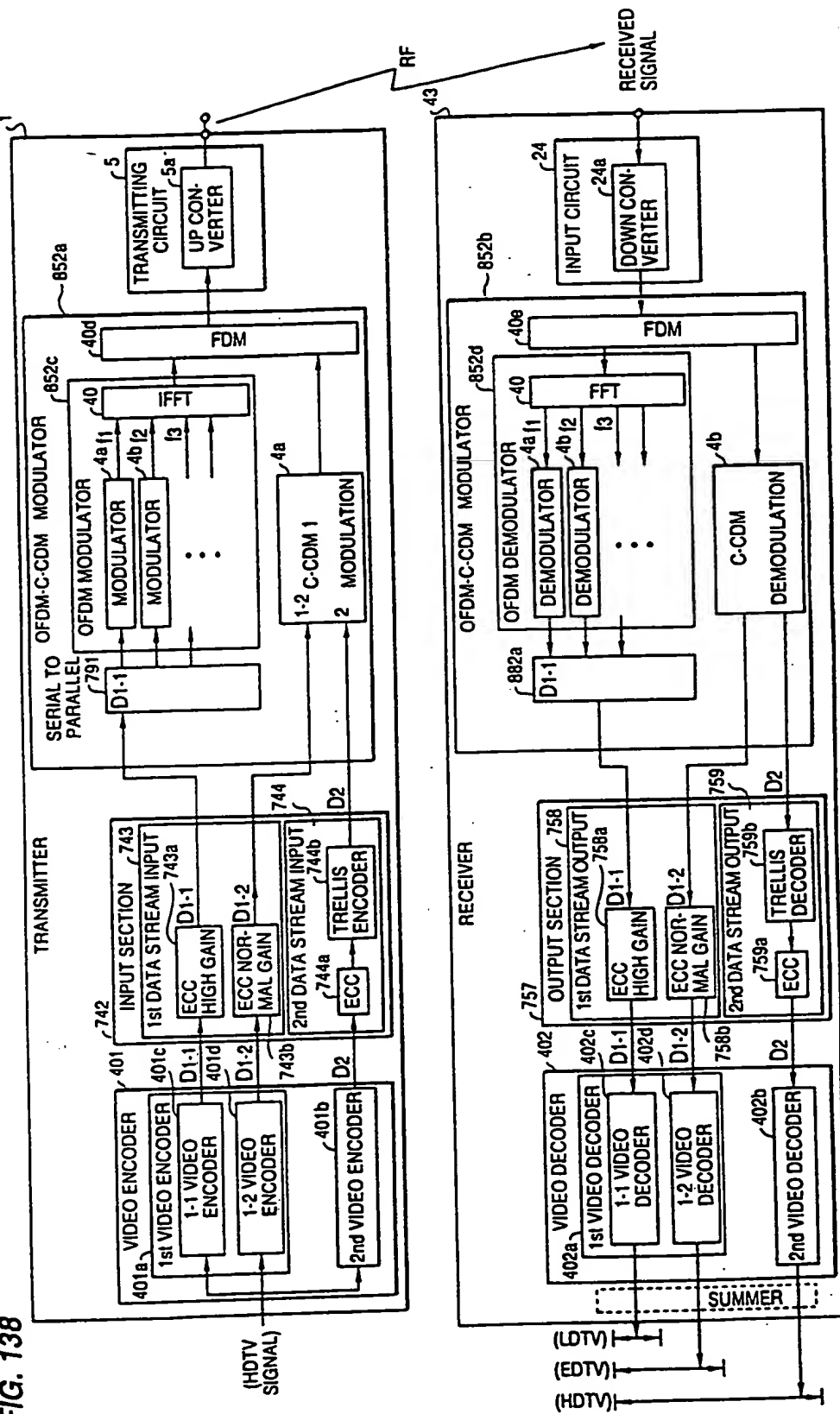




FIG. 139

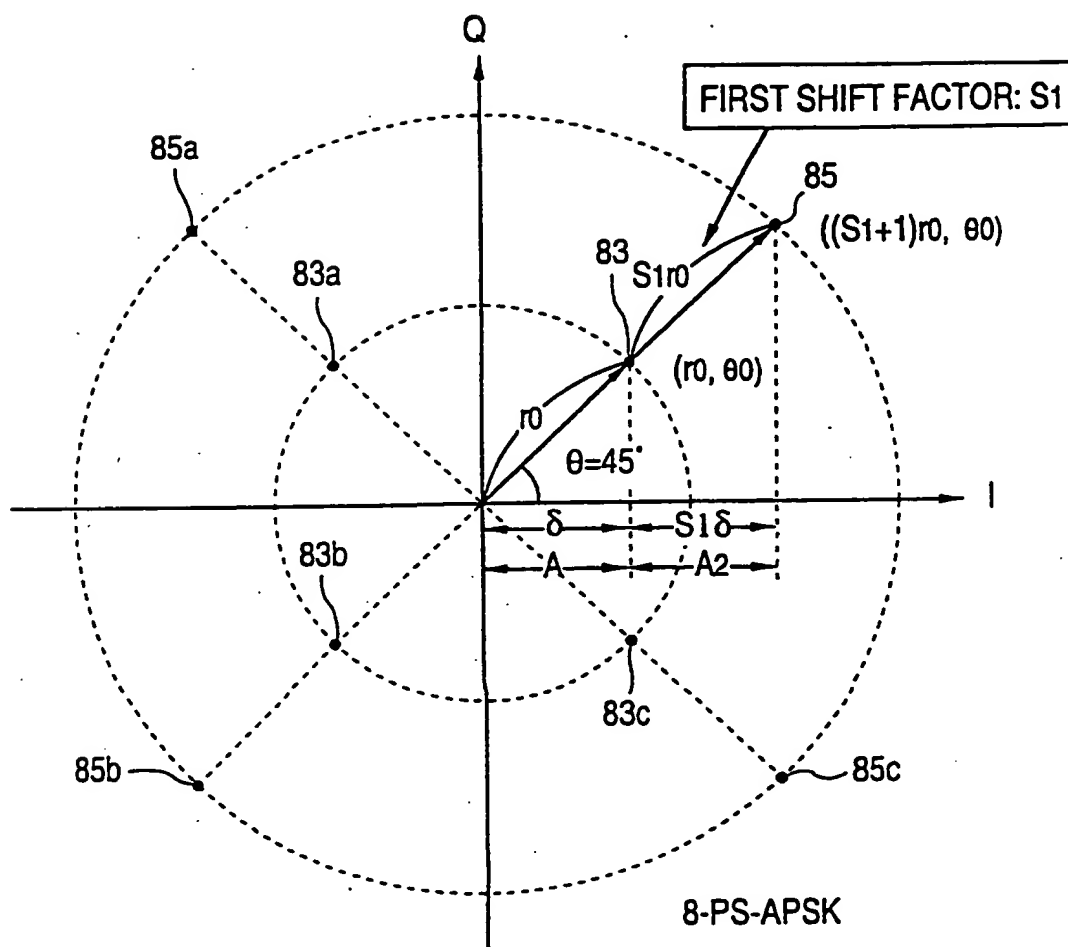




FIG. 140

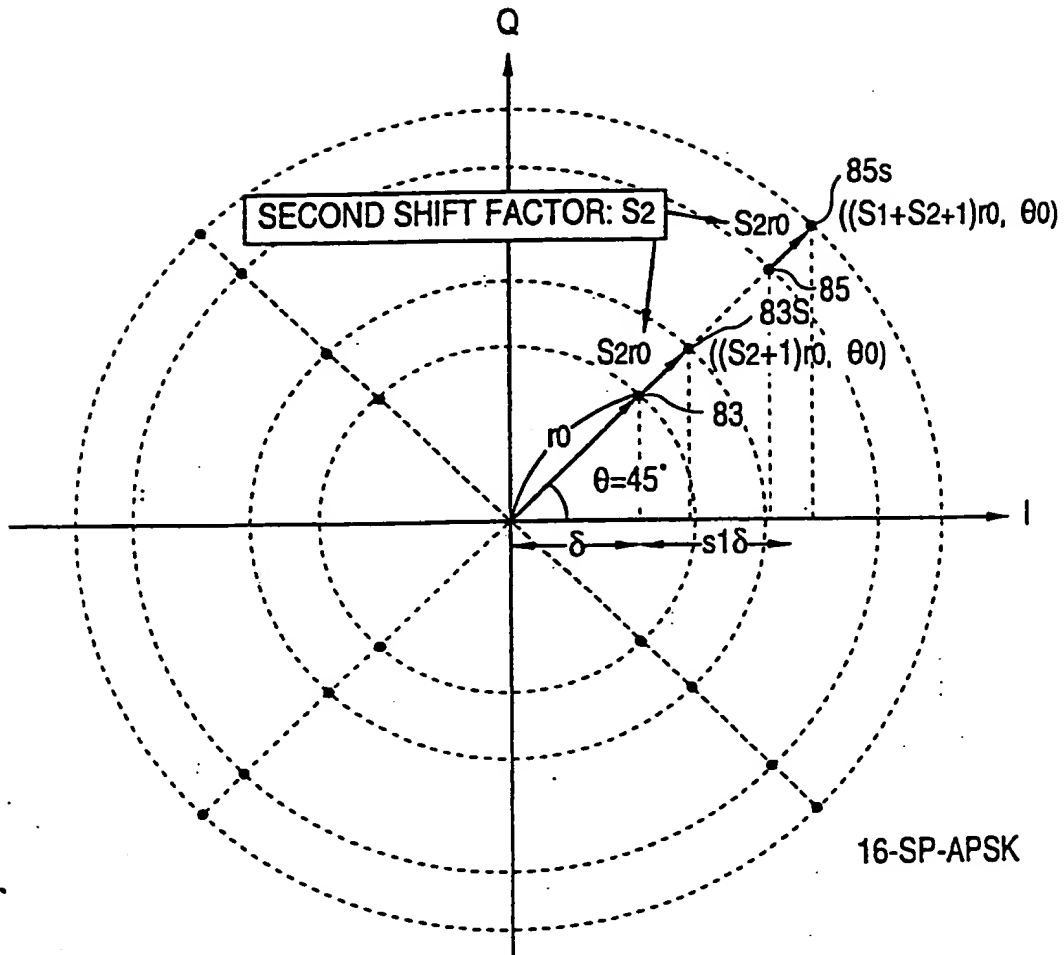




FIG. 141

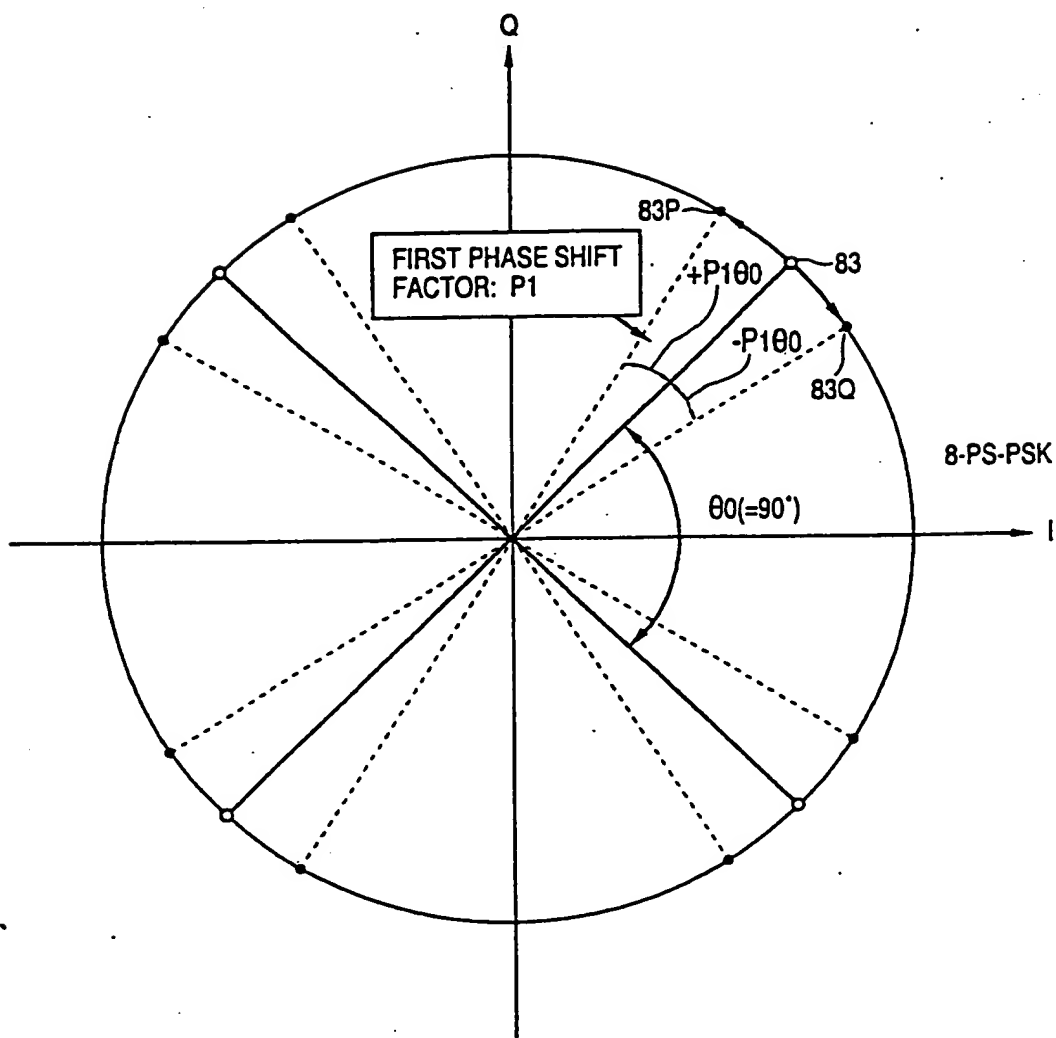


FIG. 142

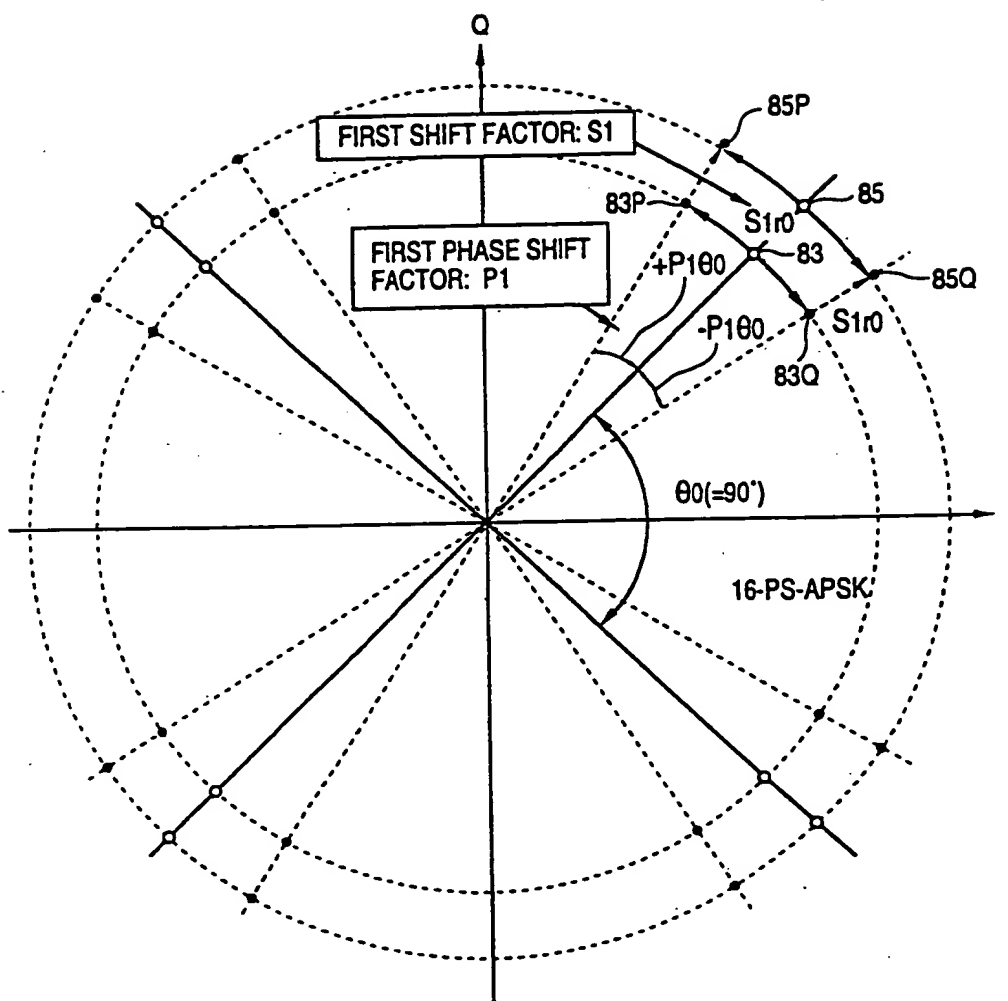




FIG. 143

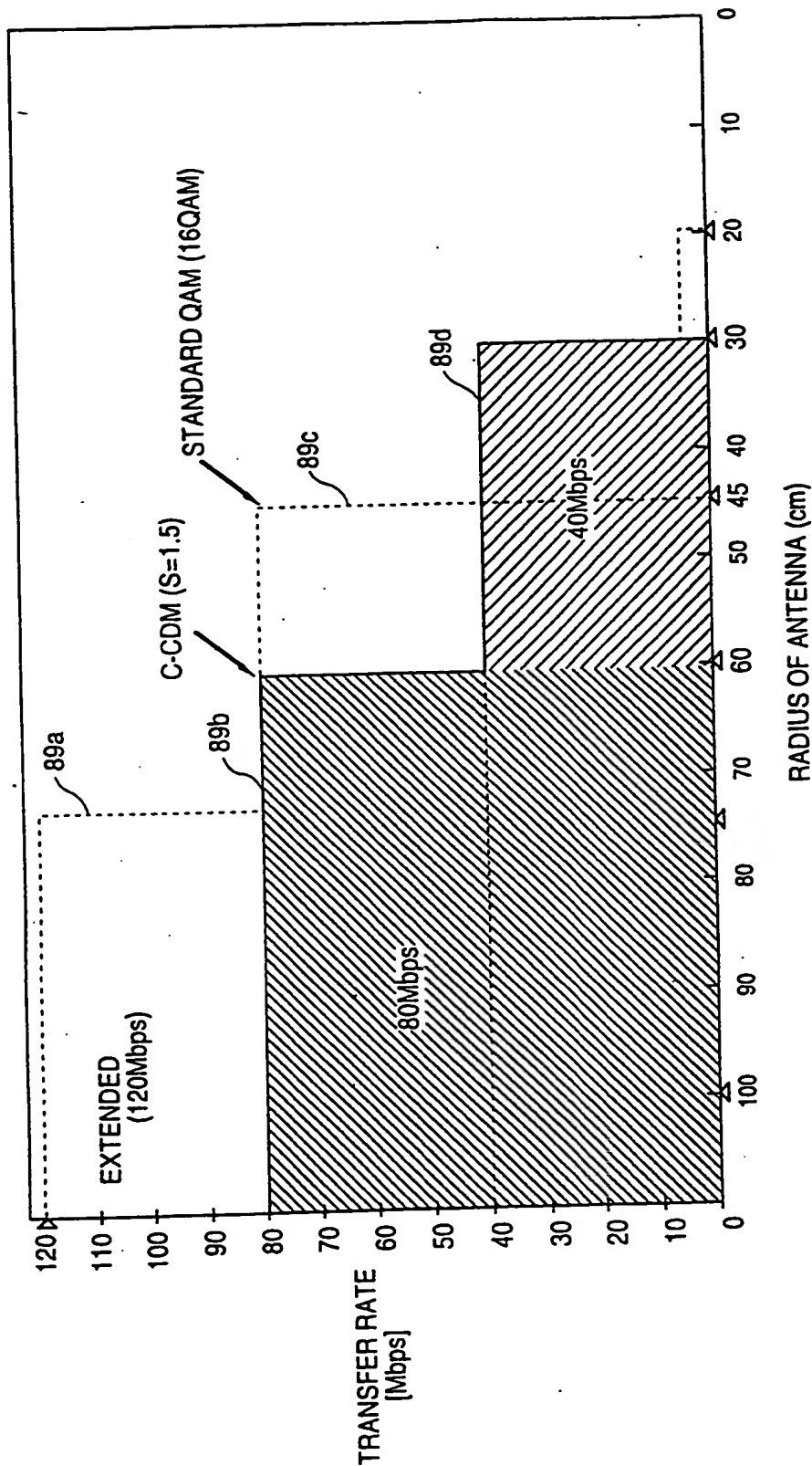


FIG. 144

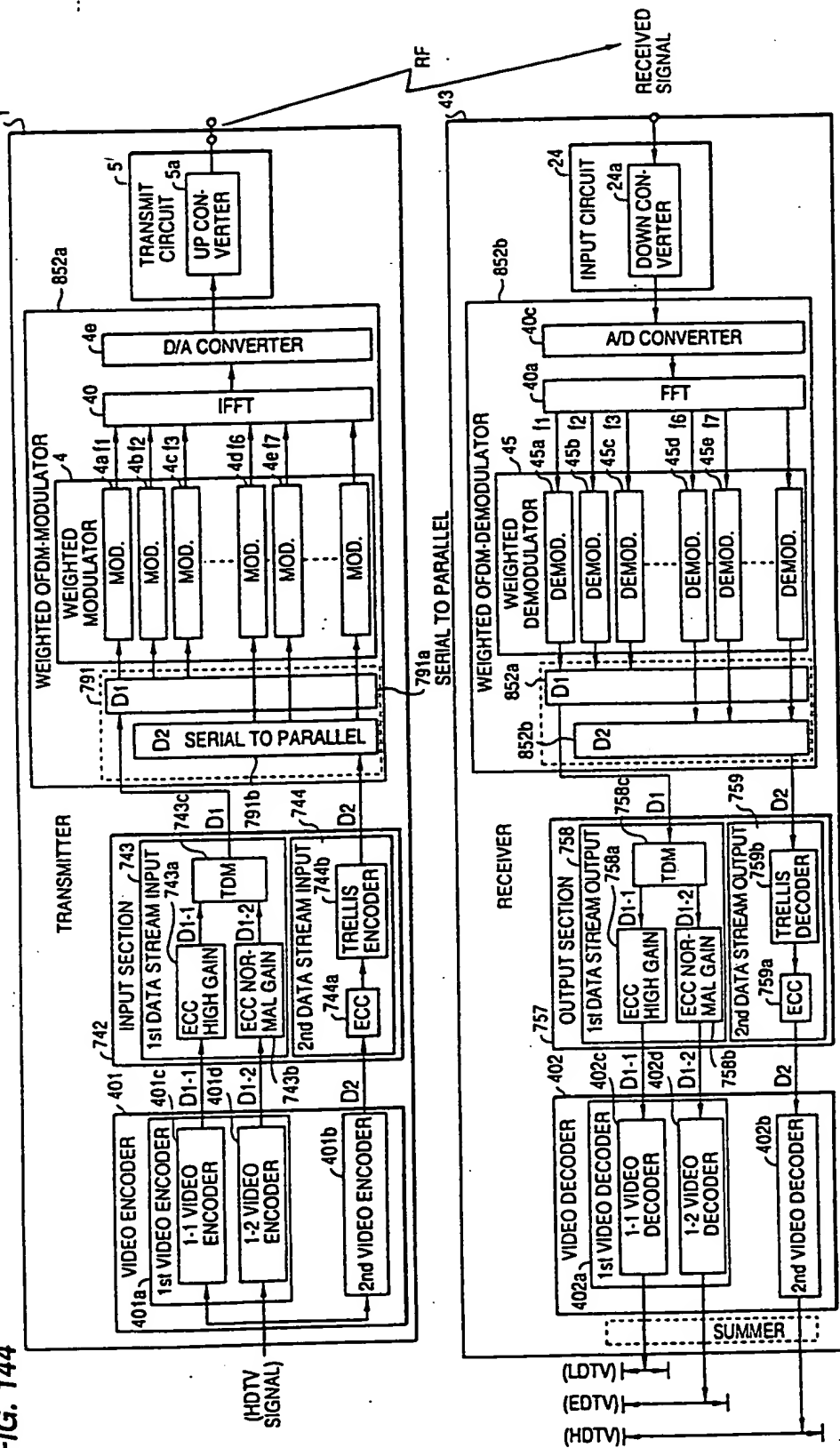




FIG. 145(a)

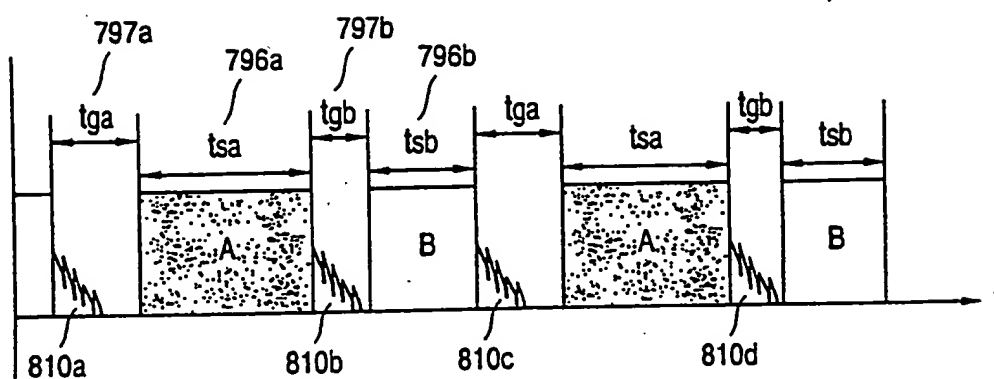


FIG. 145(b)

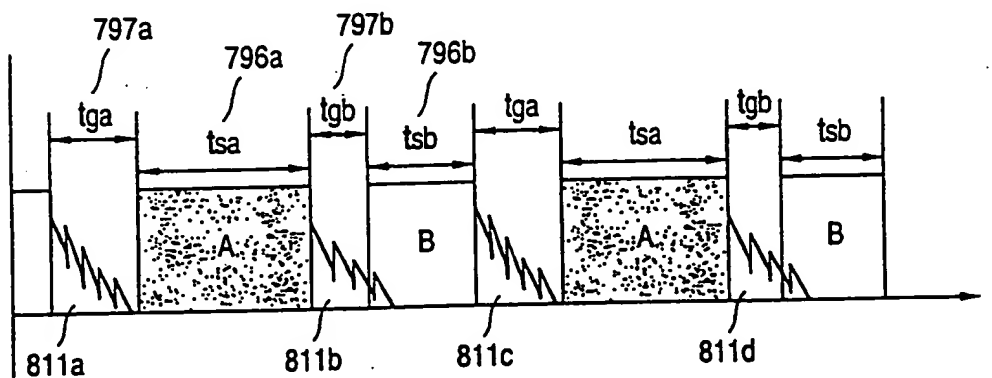




FIG. 147

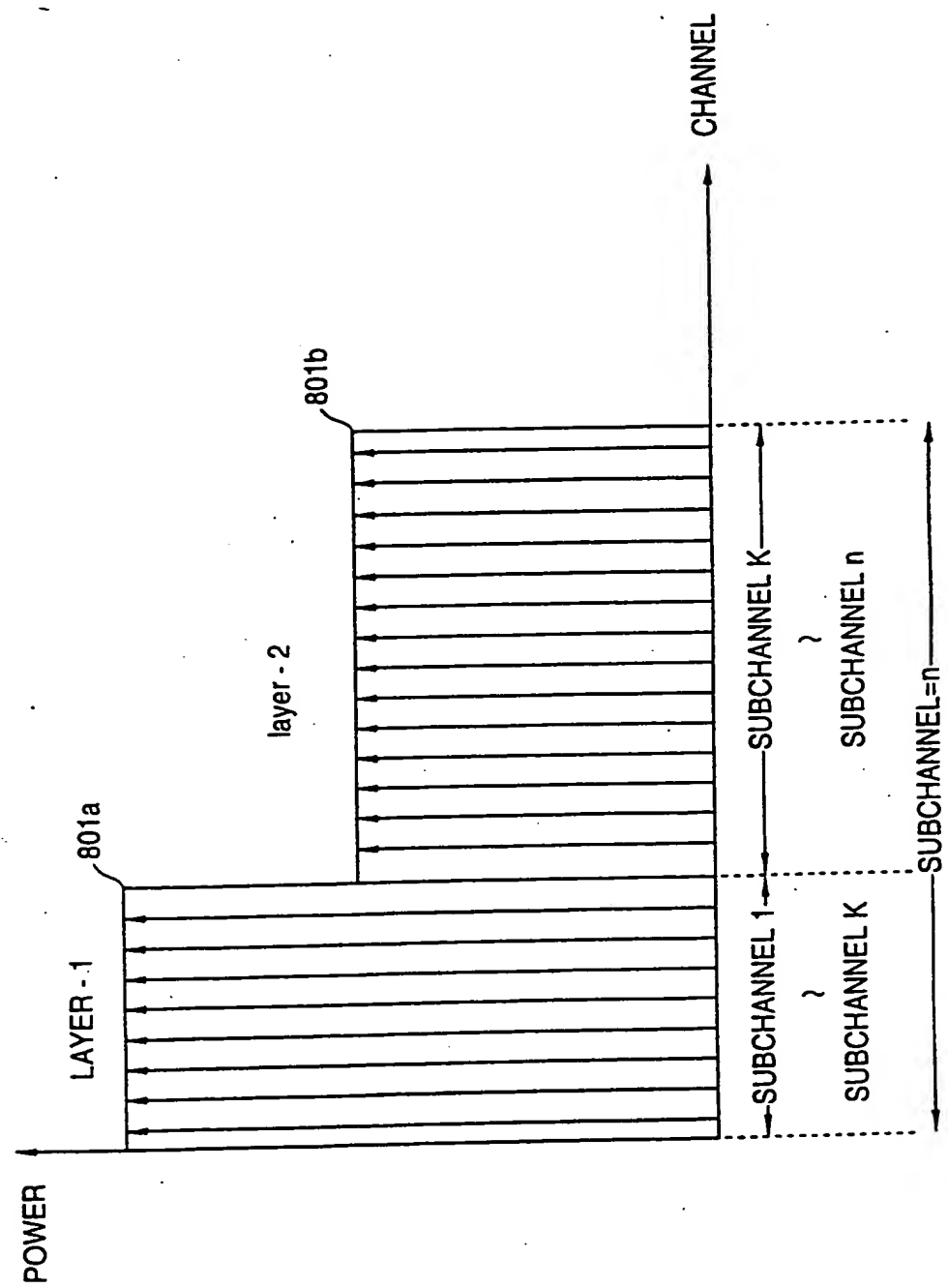
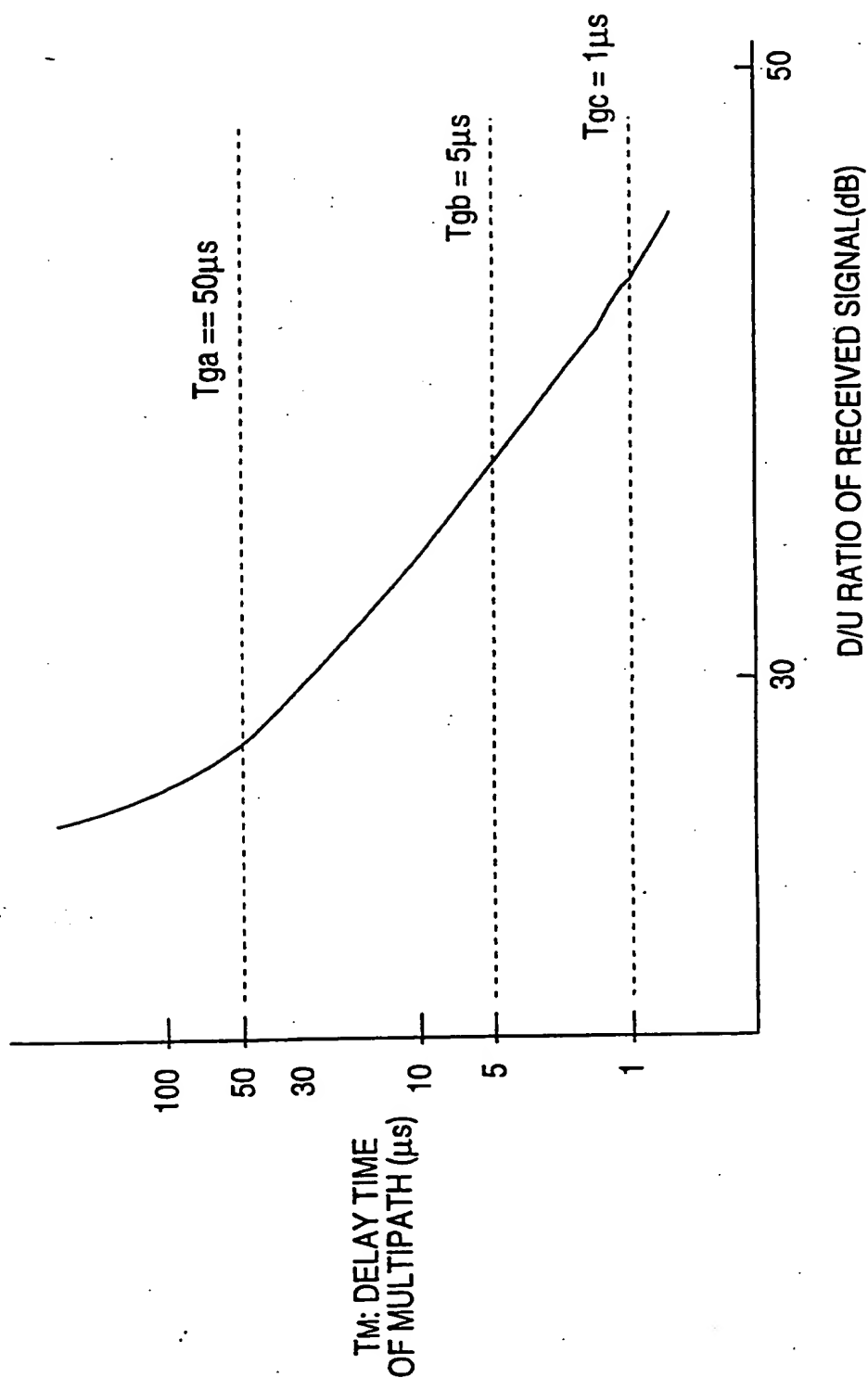




FIG. 148



O I P E J C 8 7
OCT 2 4 2002
PATENT & TRADEMARK OFFICE

U.S. Patent

Feb. 4, 1997

Sheet 148 of 178

5,600,672

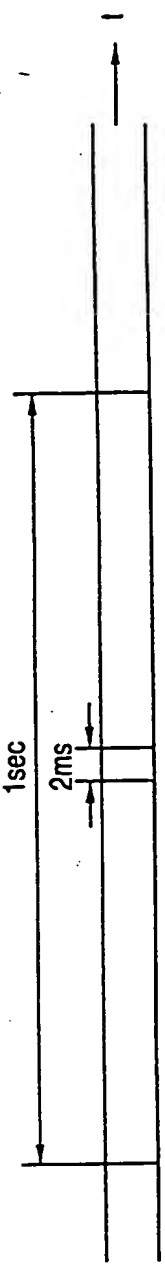


FIG. 149(a)

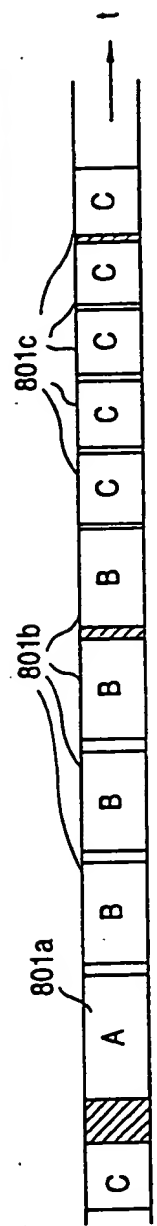


FIG. 149(b)

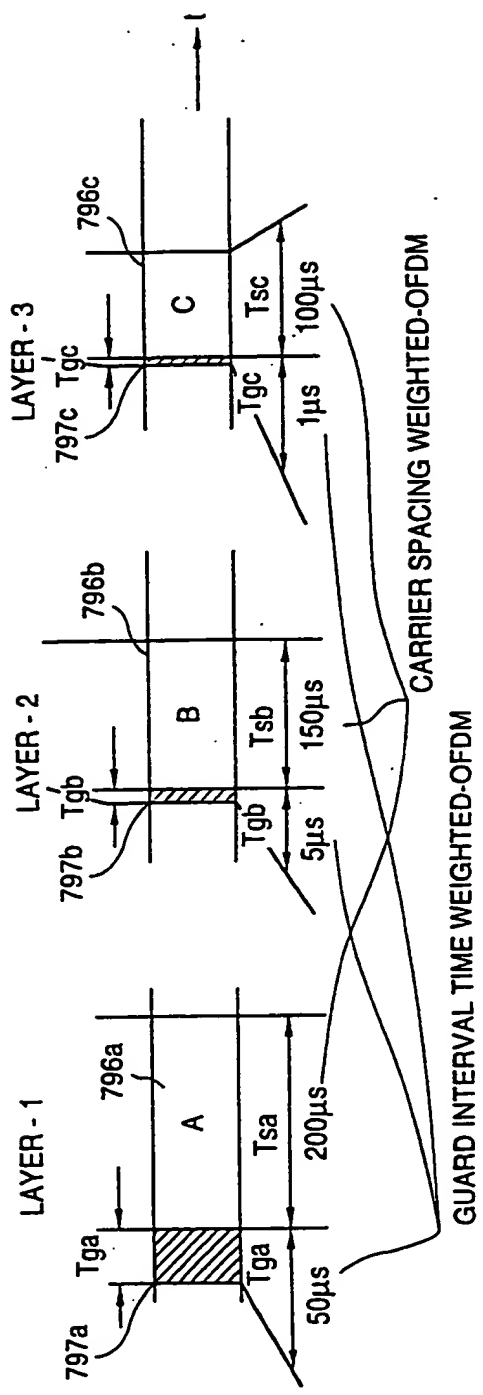


FIG. 149(c)



FIG. 150

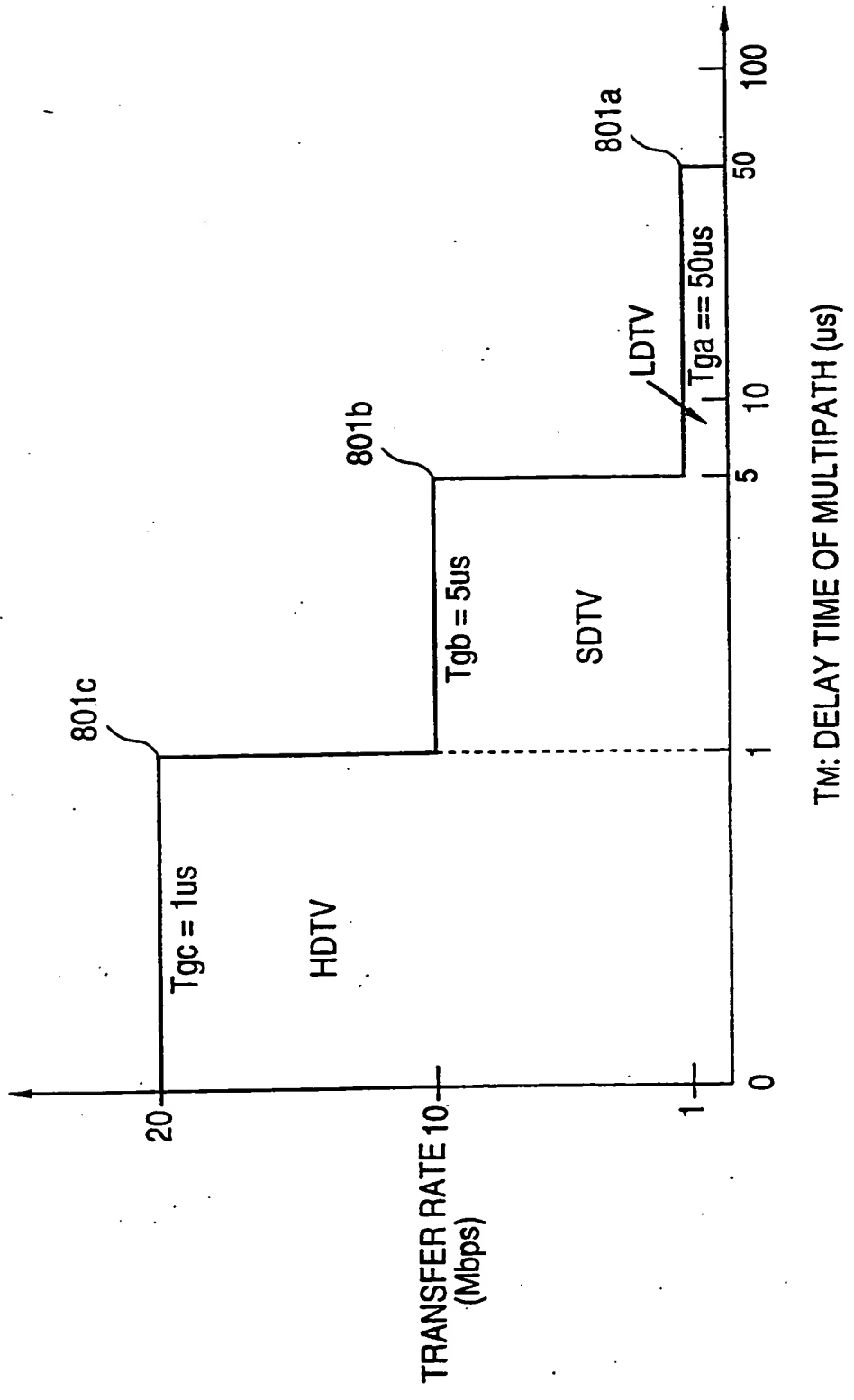


FIG. 151

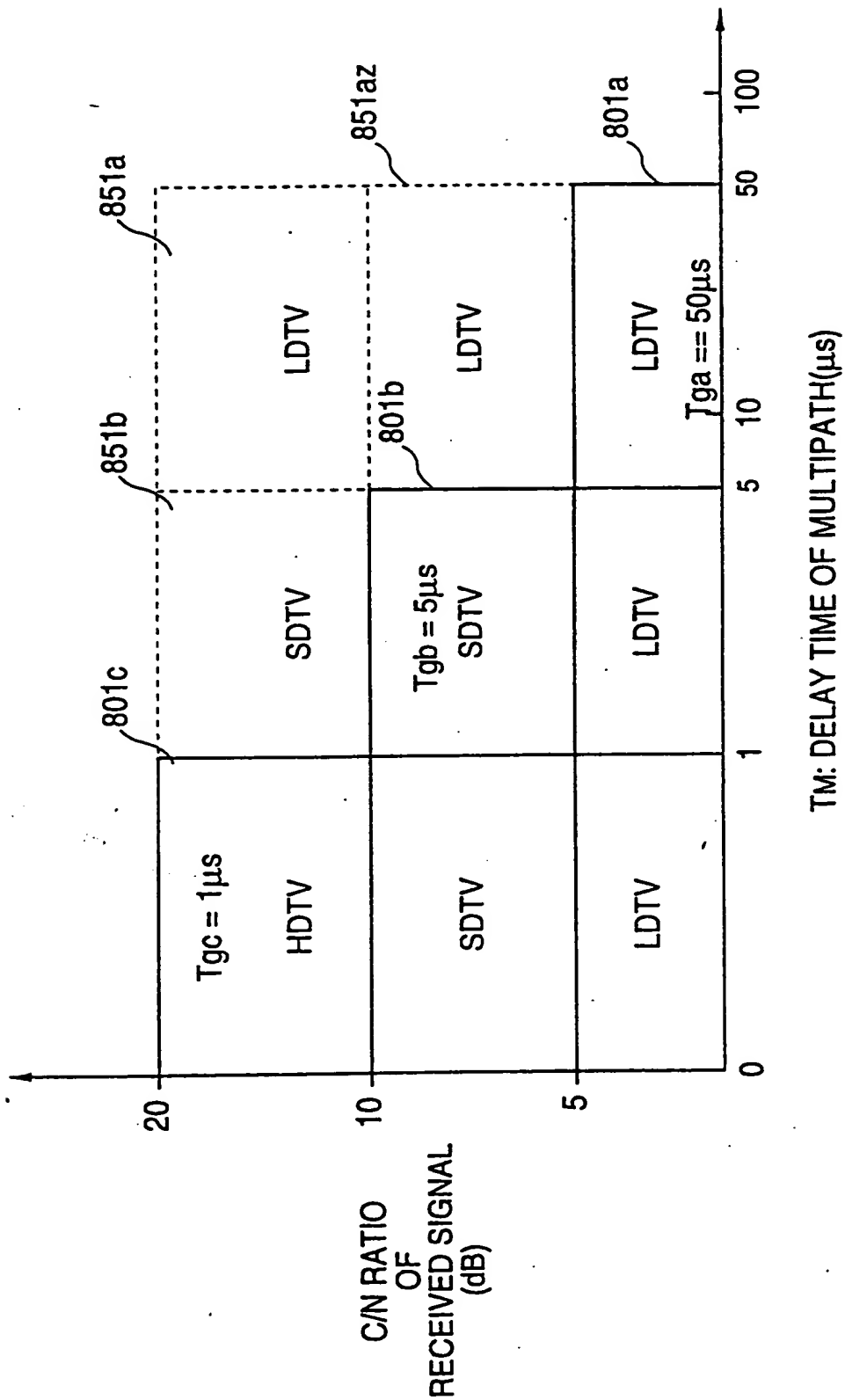




FIG. 152

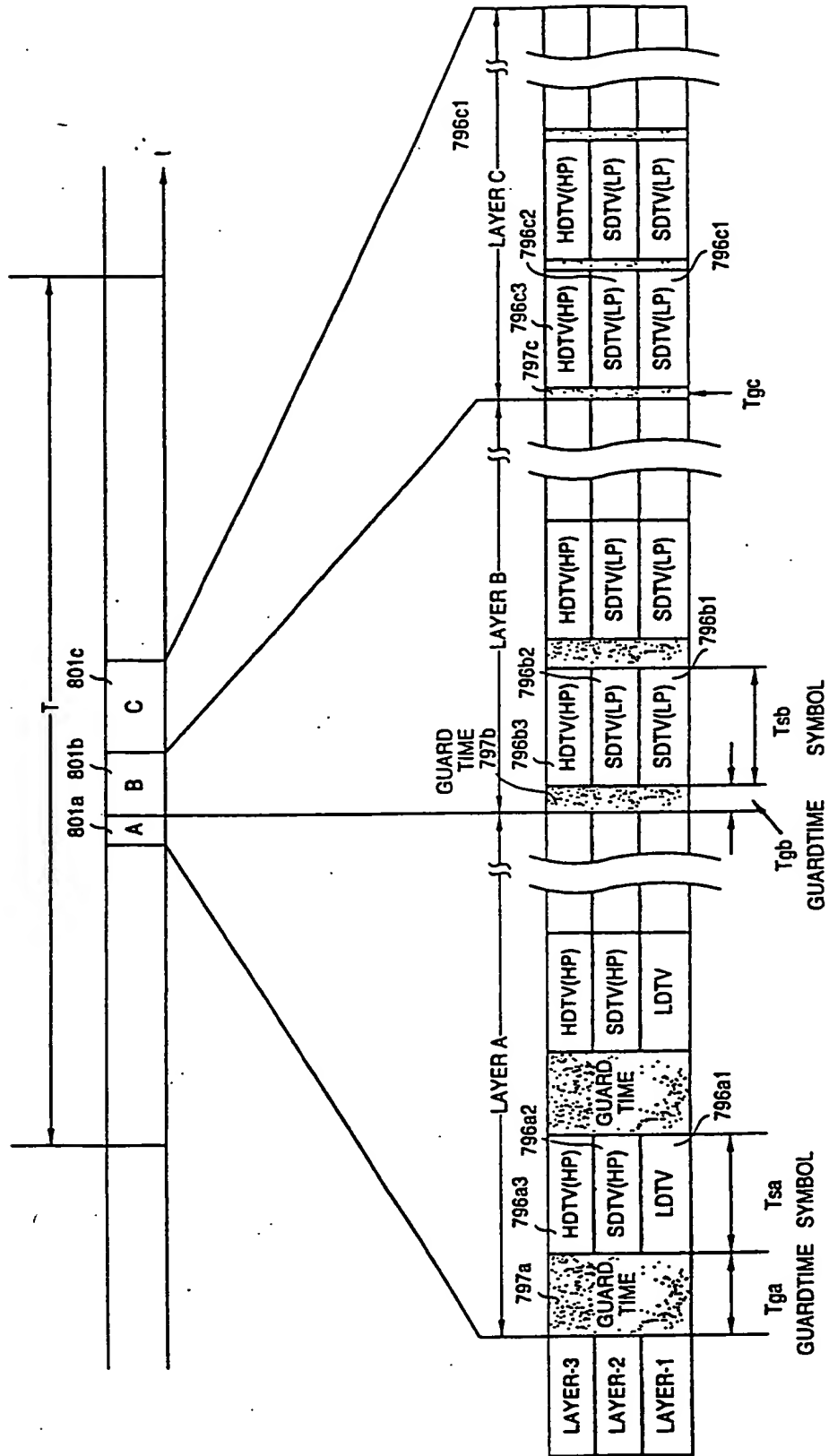
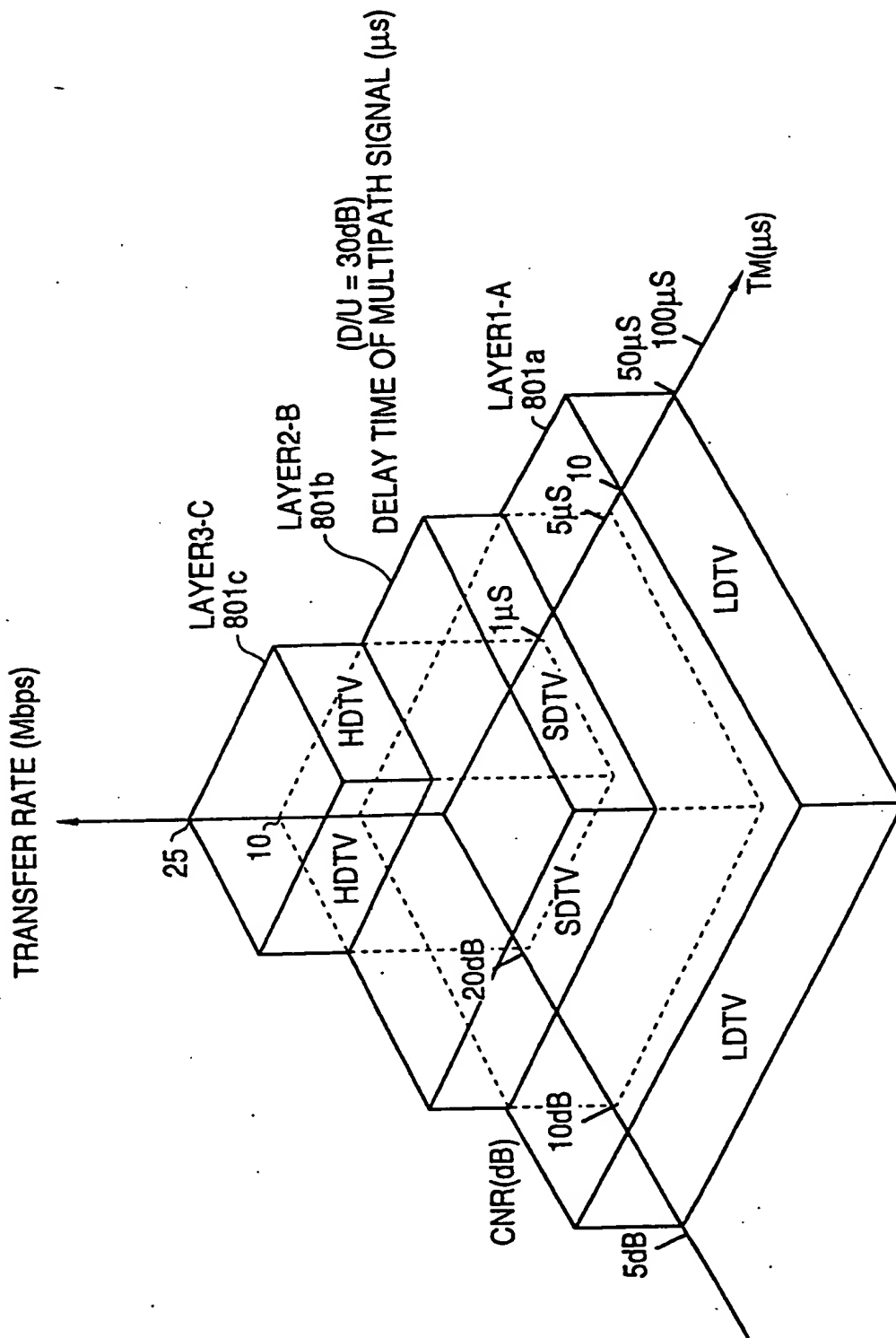
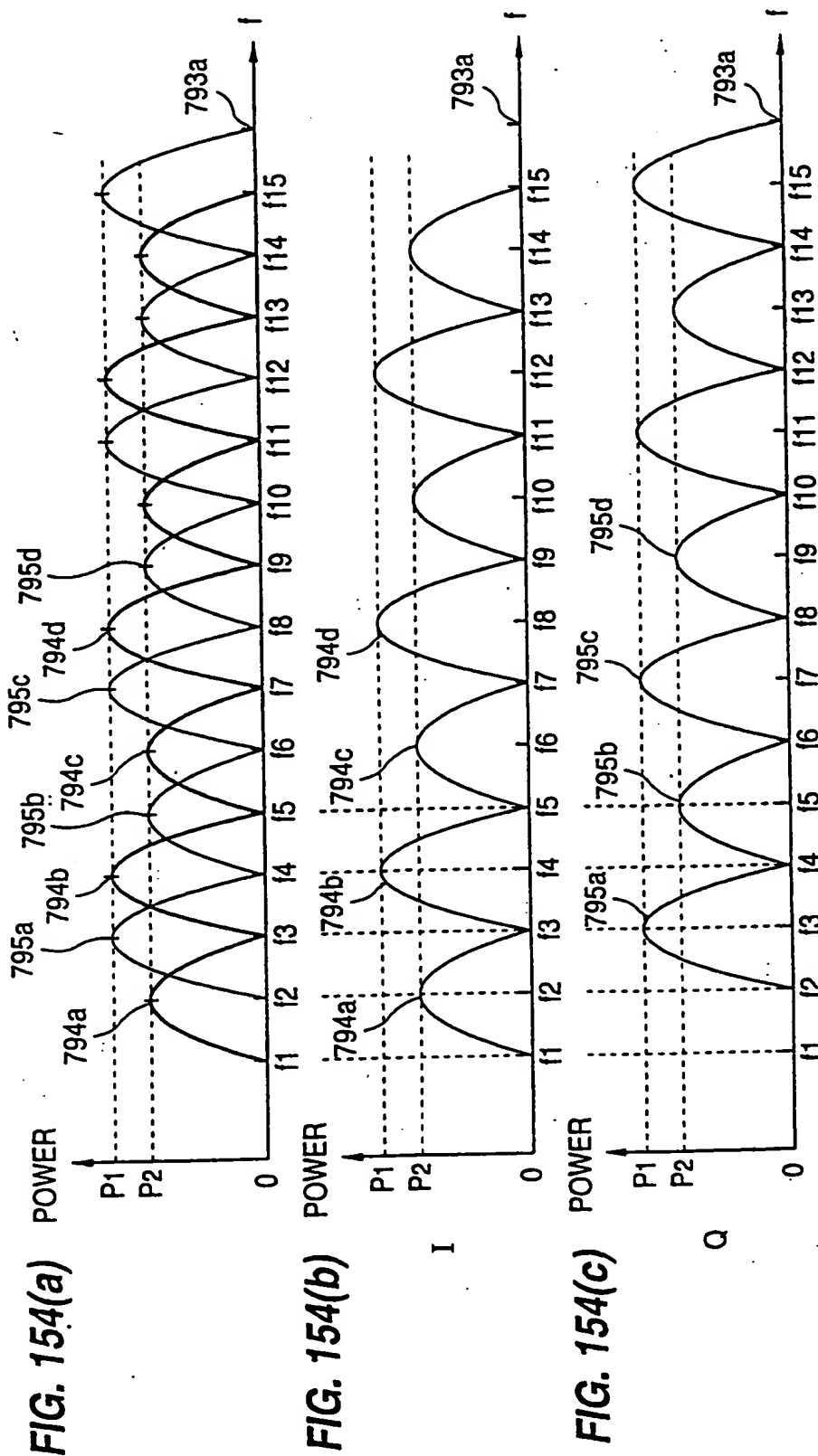


FIG. 153





OCT 24 2002

RECEIVED

U.S. Patent

Feb. 4, 1997

Sheet 154 of 178

5,600,672

FIG. 155

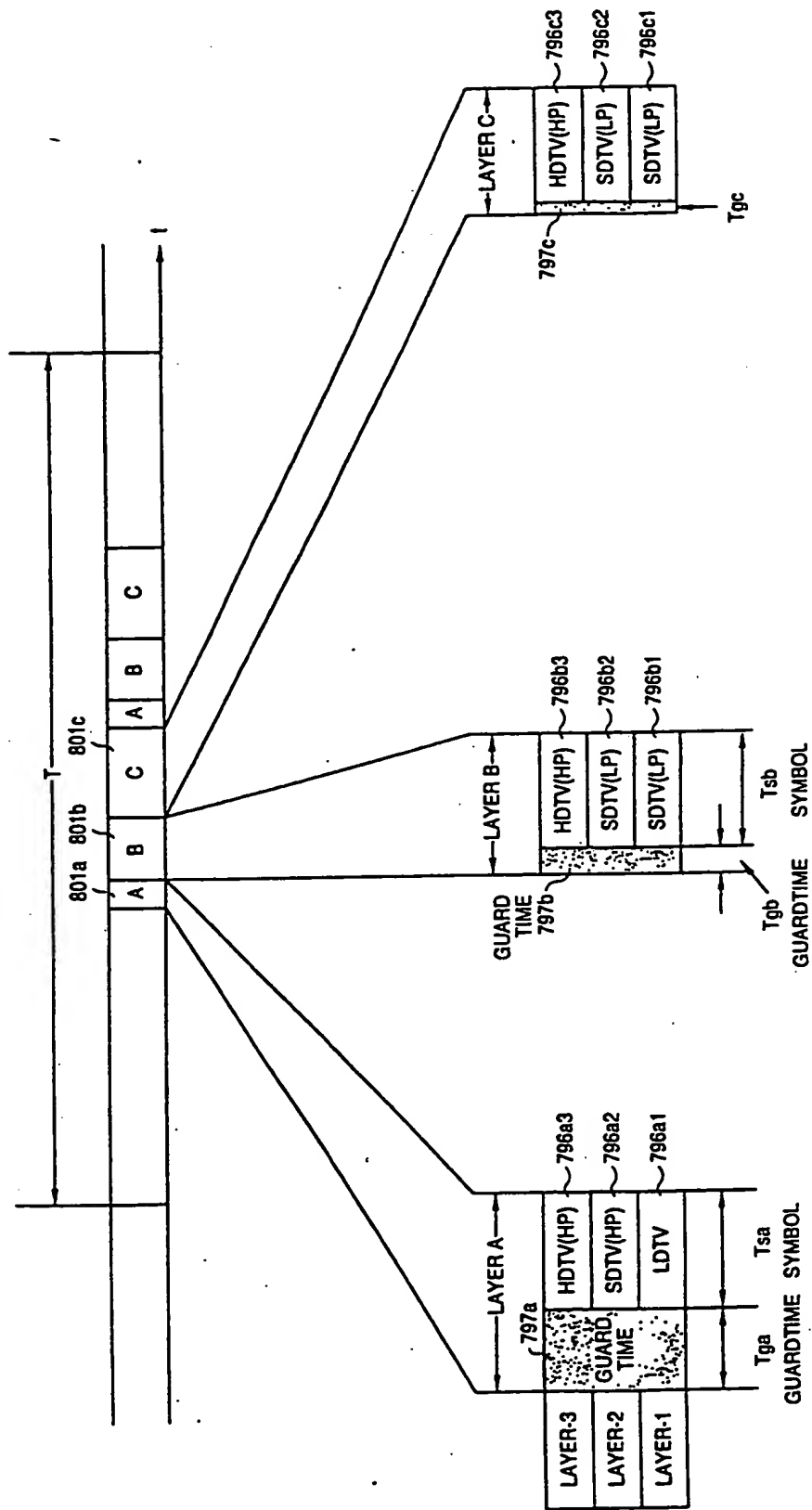


FIG. 156

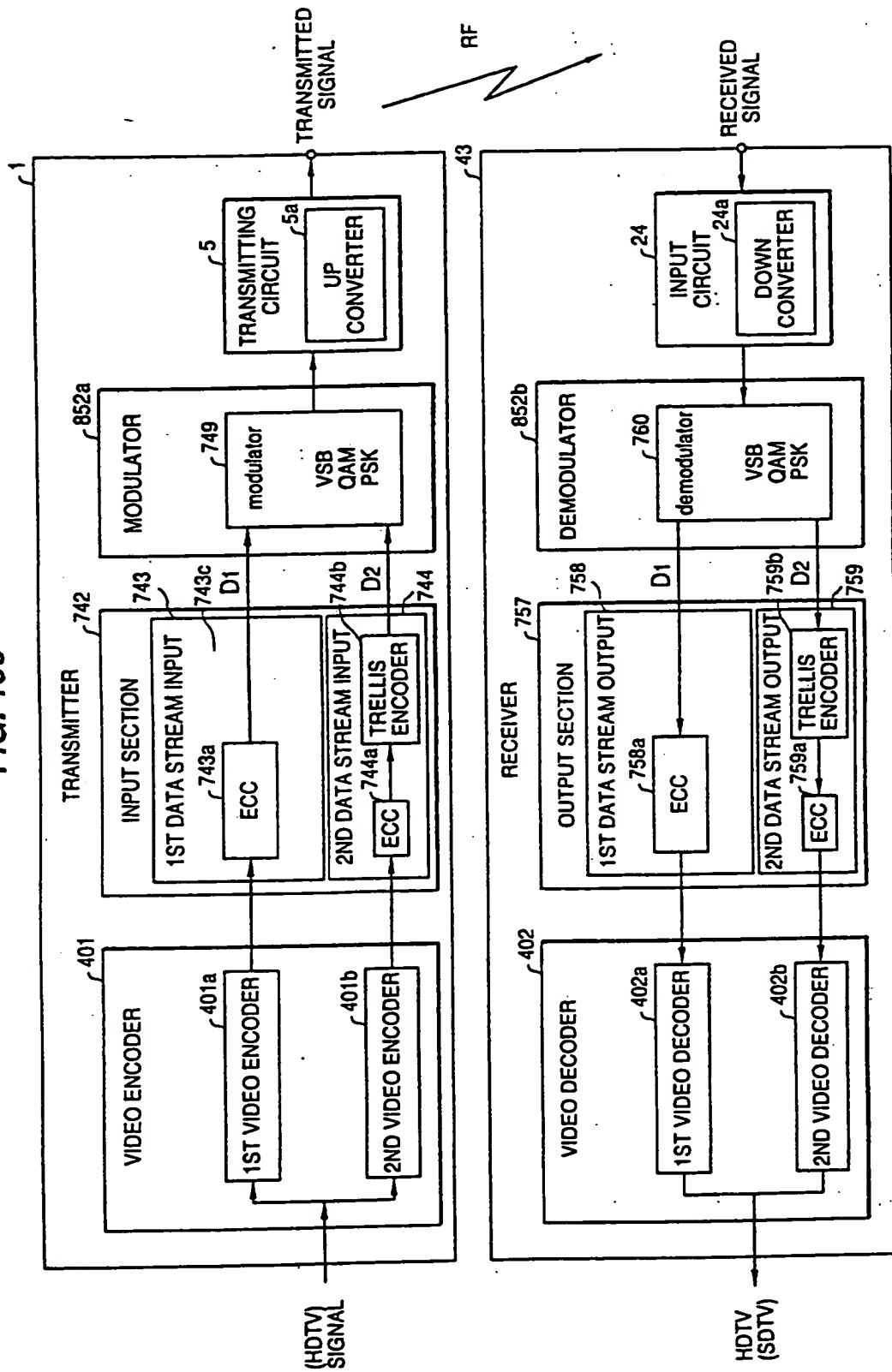




FIG. 157

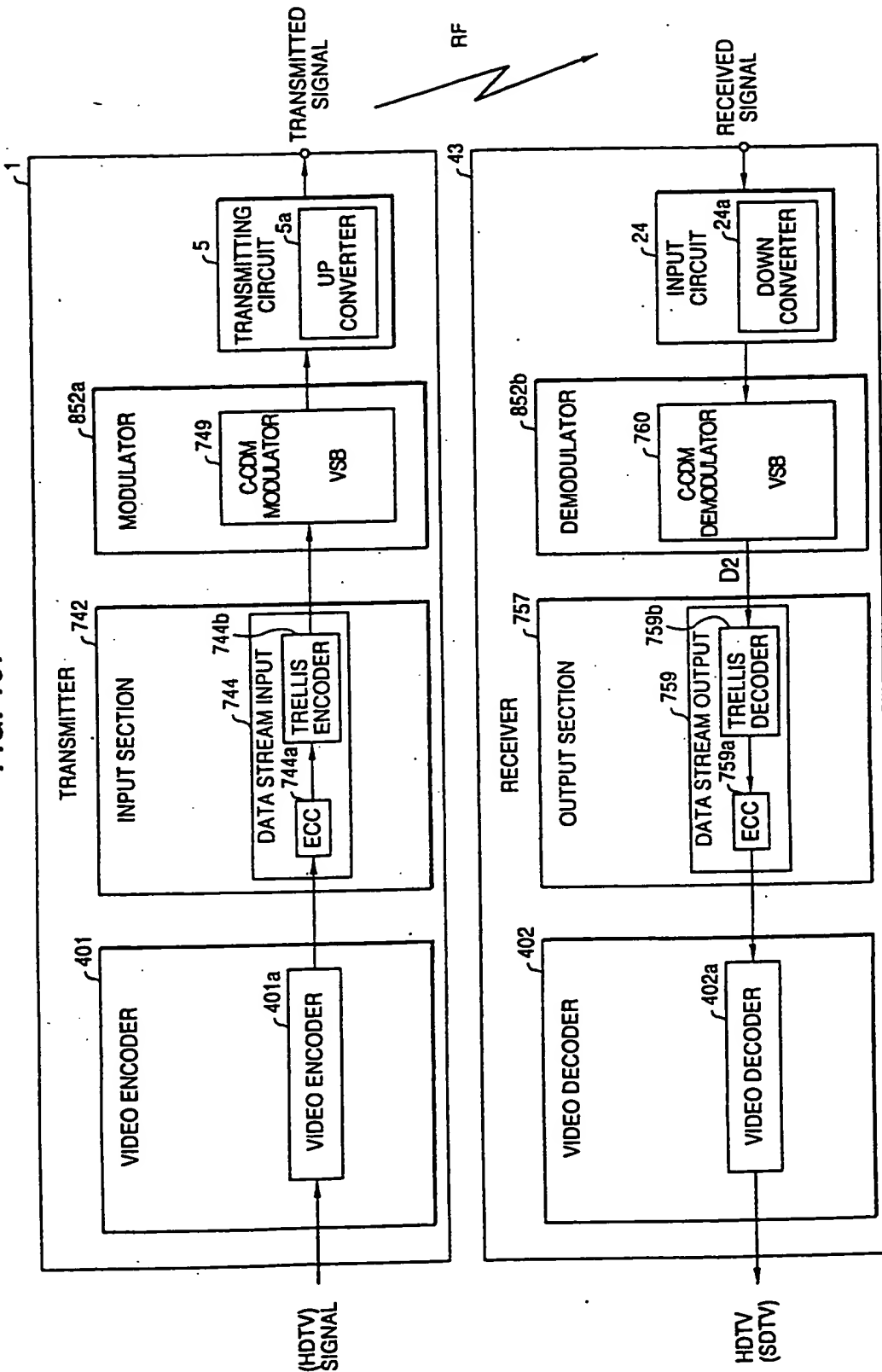
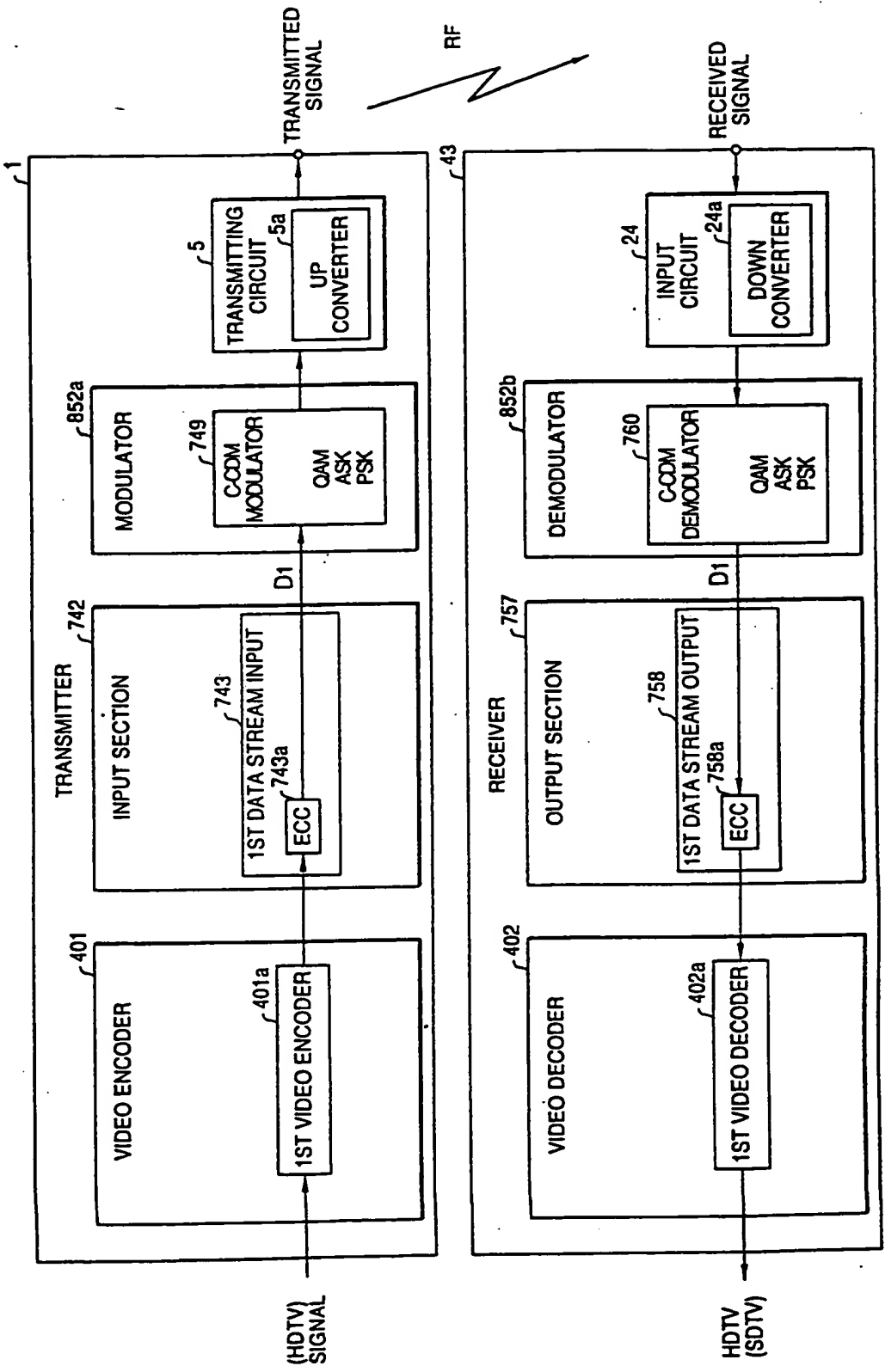
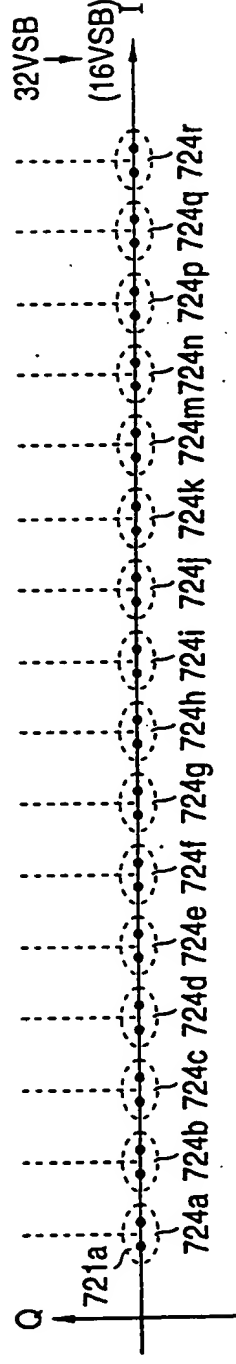
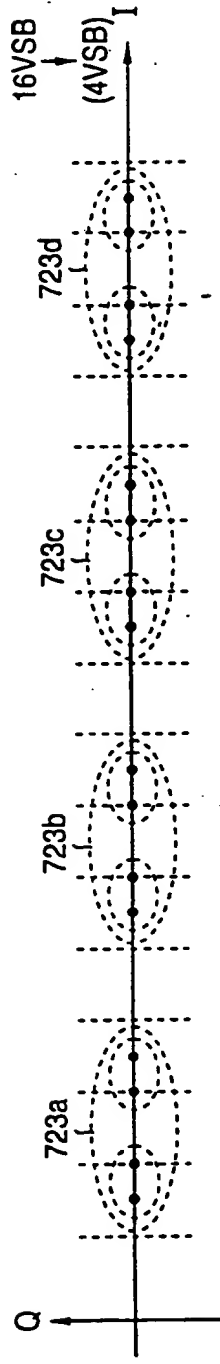
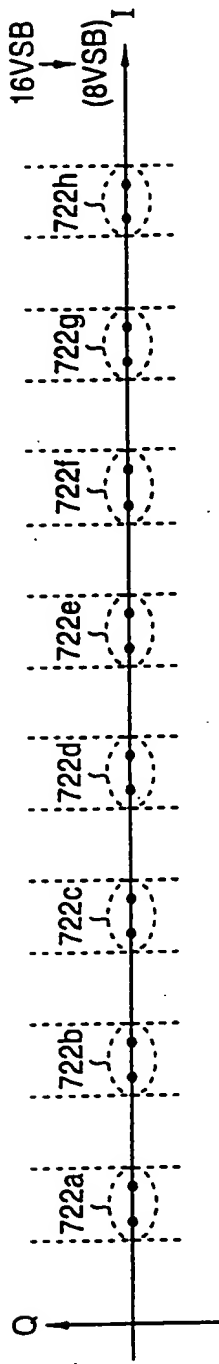
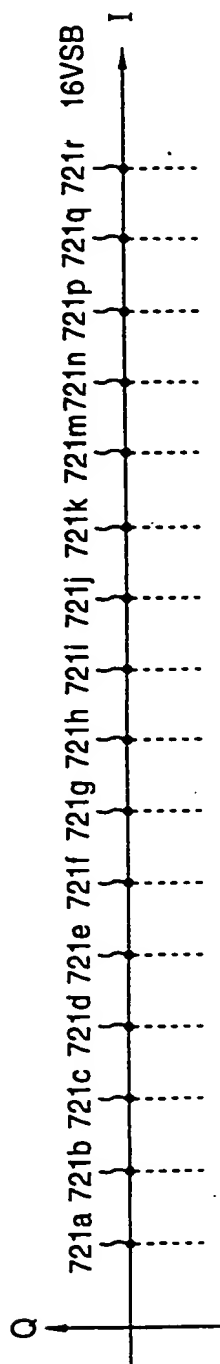




FIG. 158





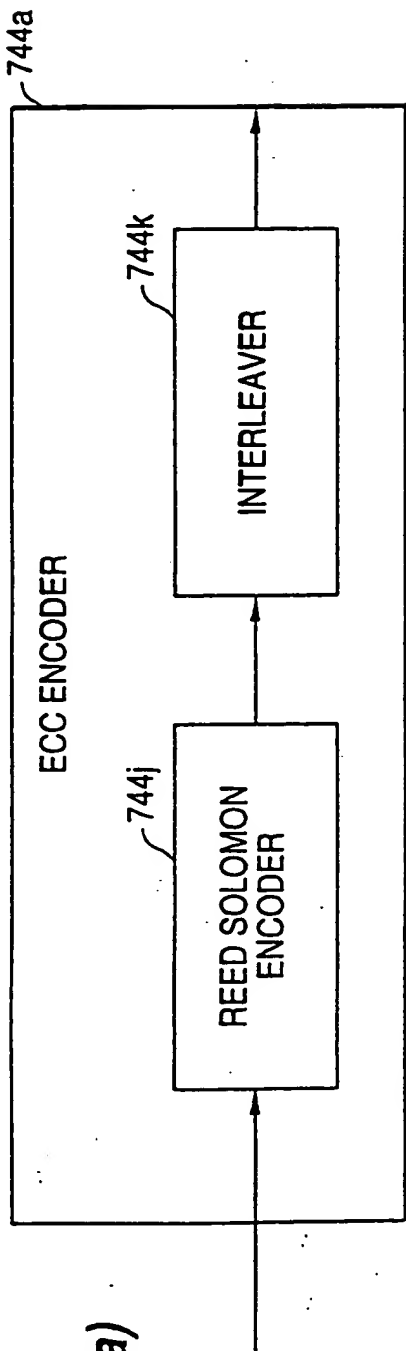


FIG. 160(a)

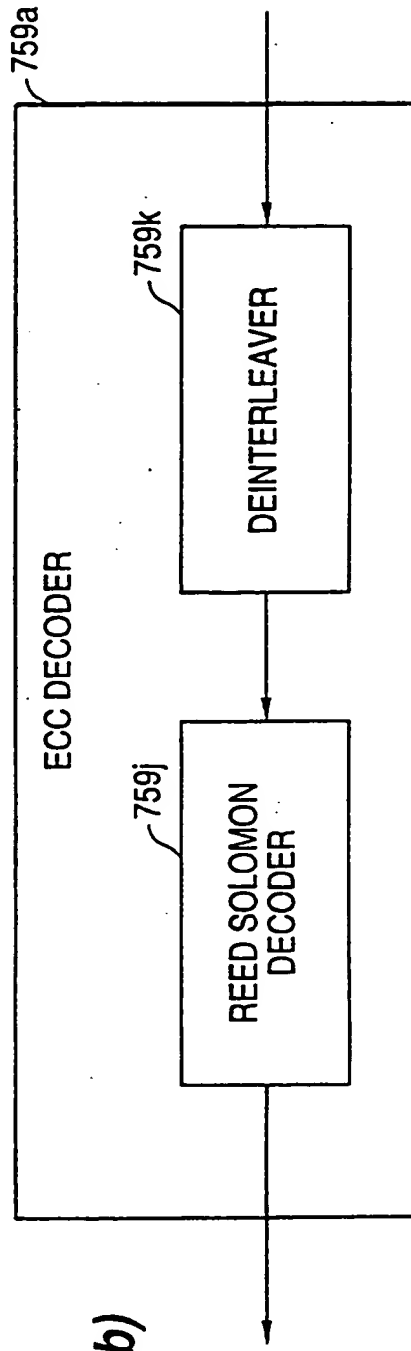


FIG. 160(b)



FIG. 161

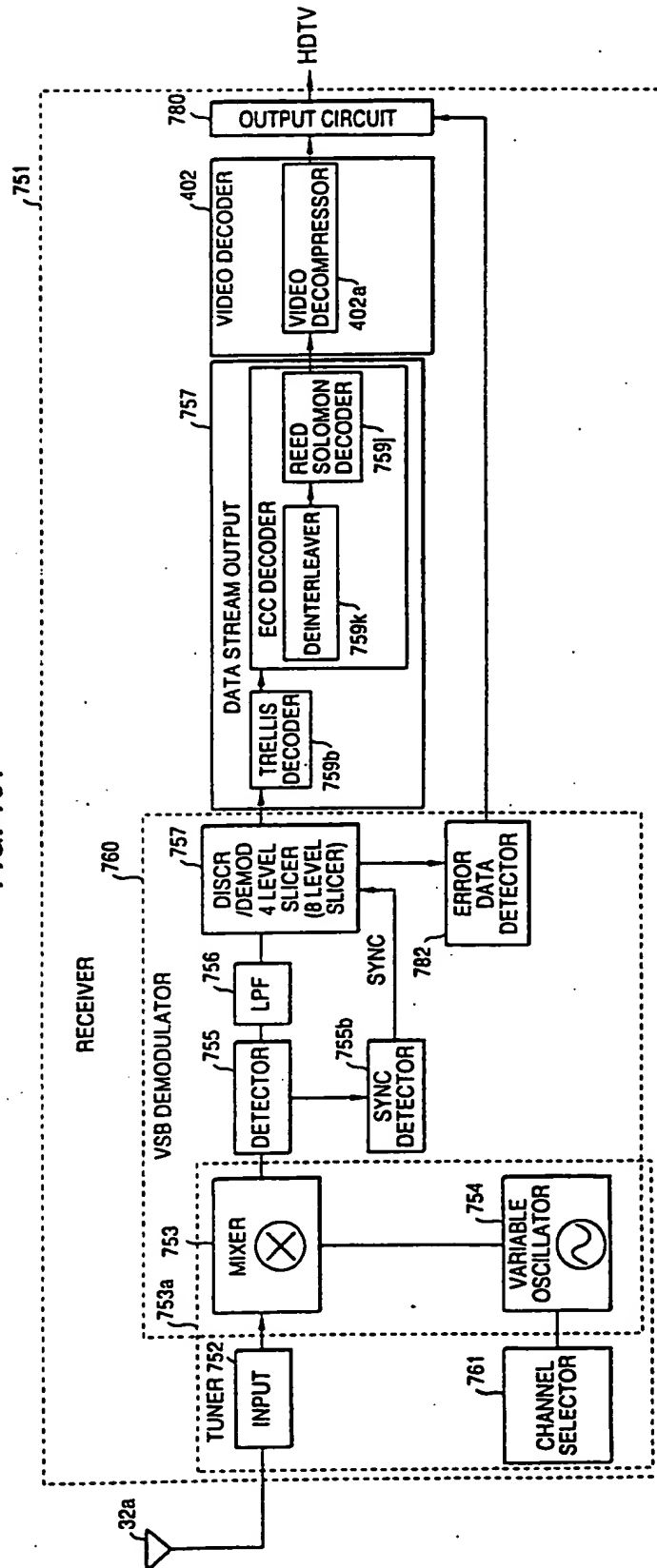


FIG. 162

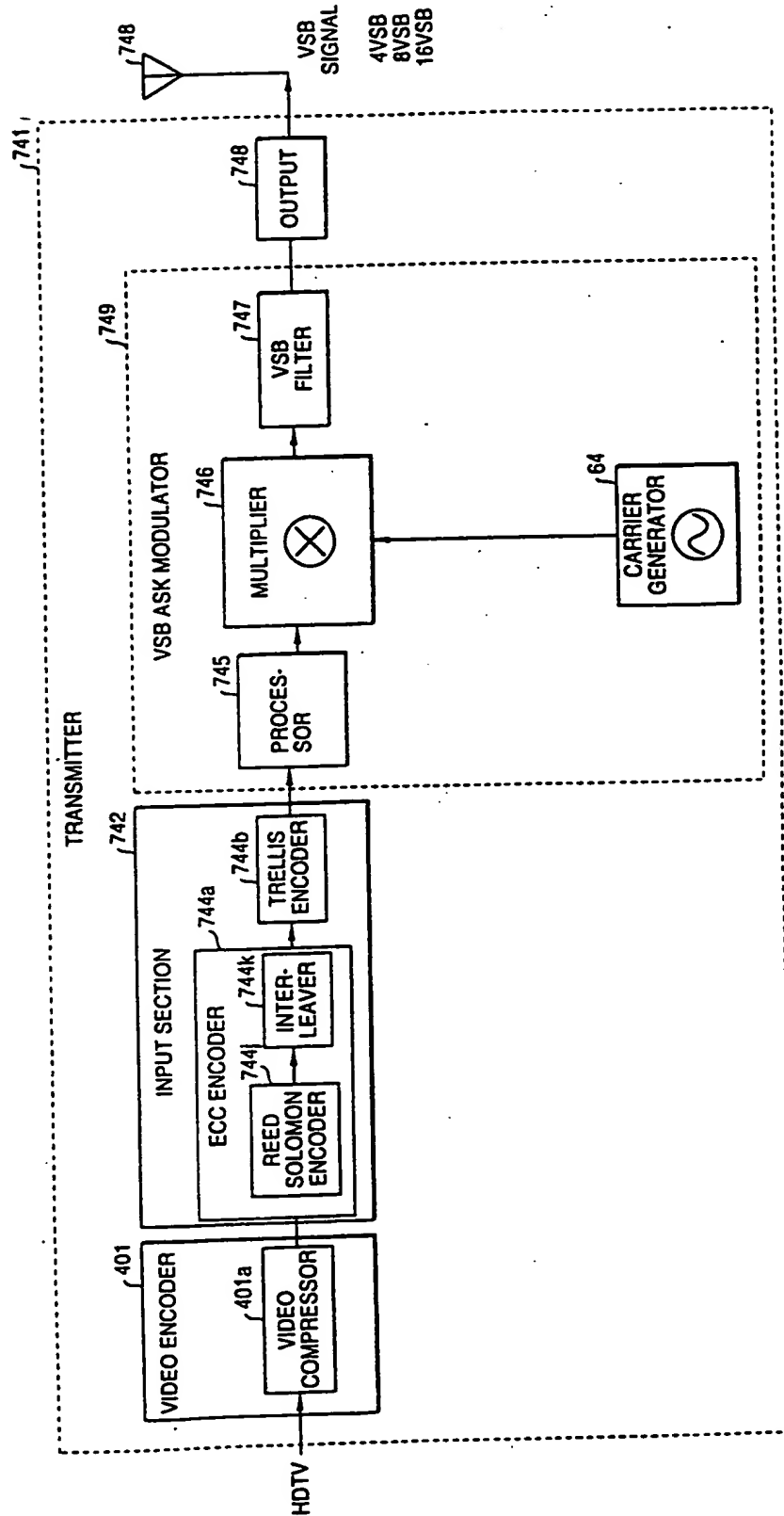




FIG. 163

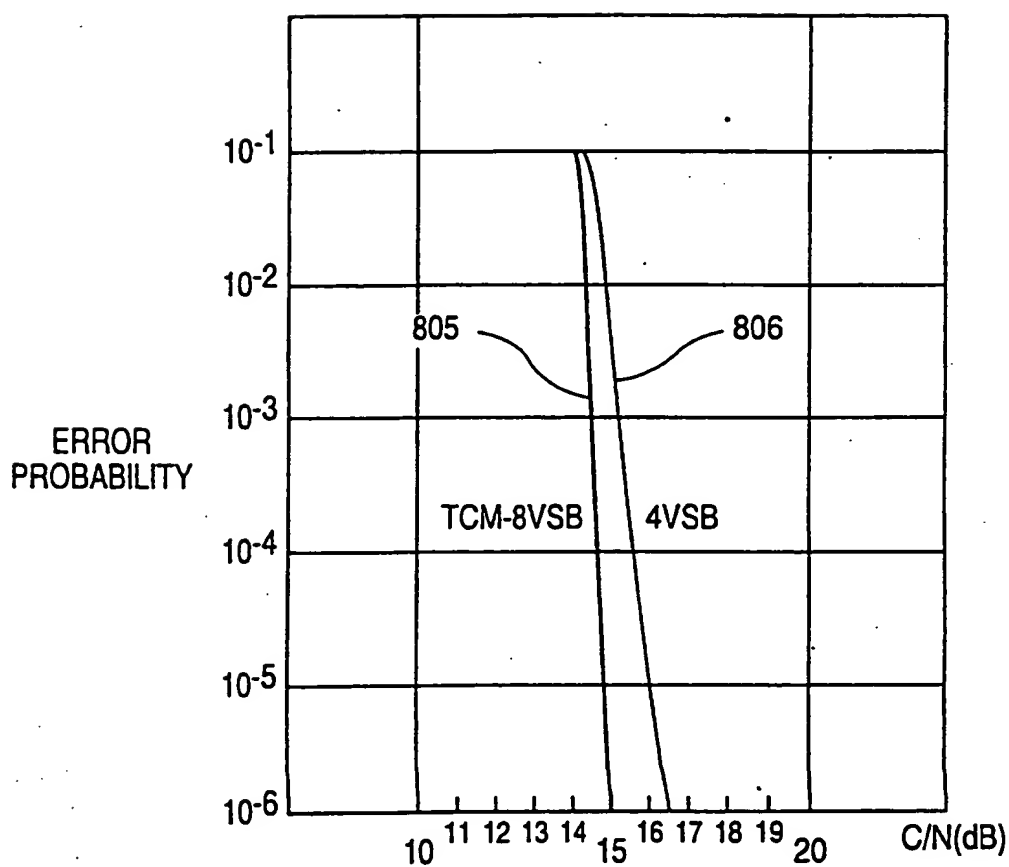




FIG. 164

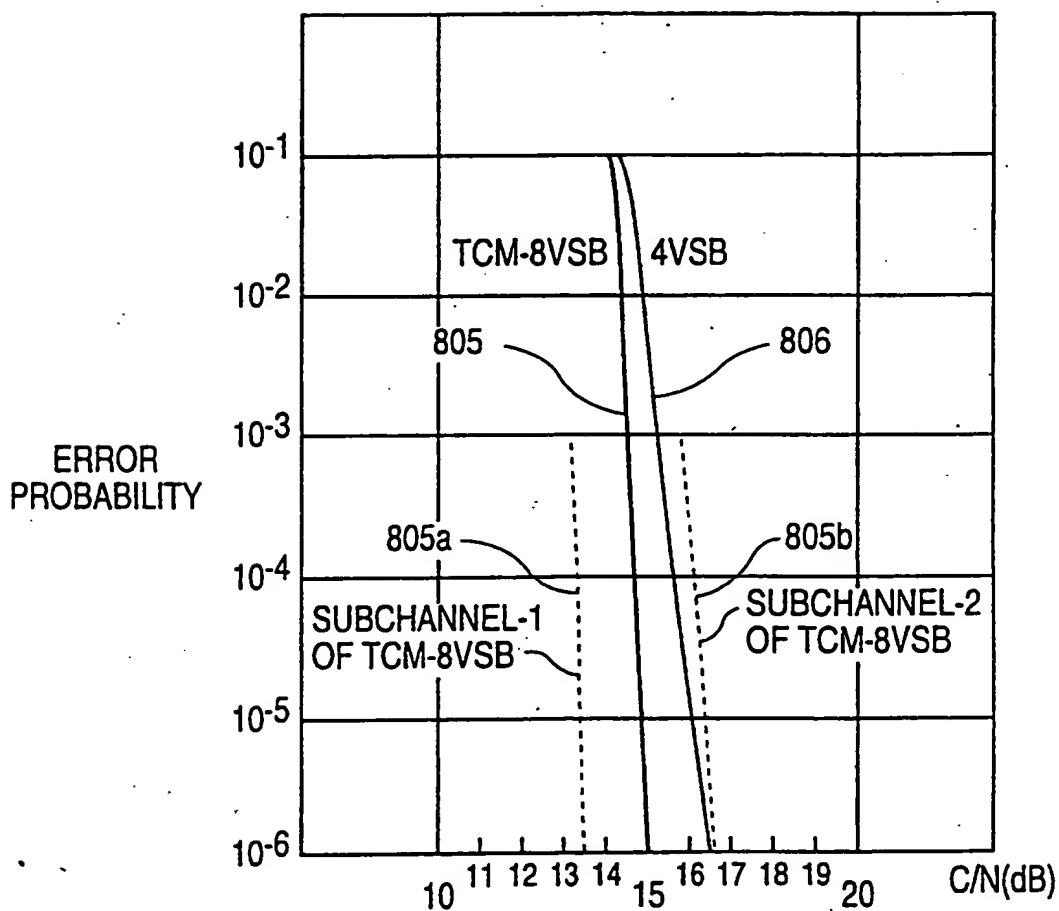




FIG. 165(a)

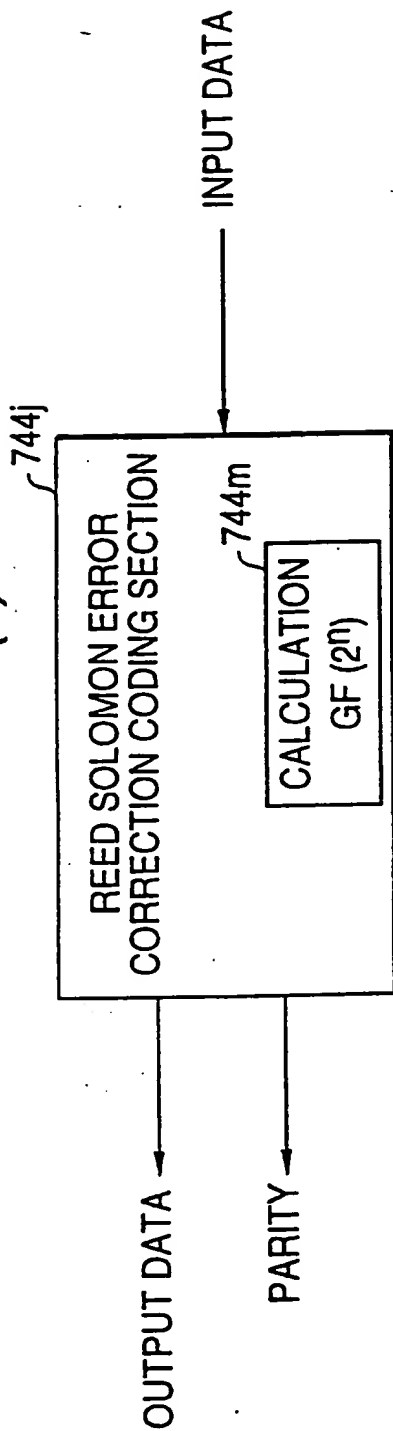
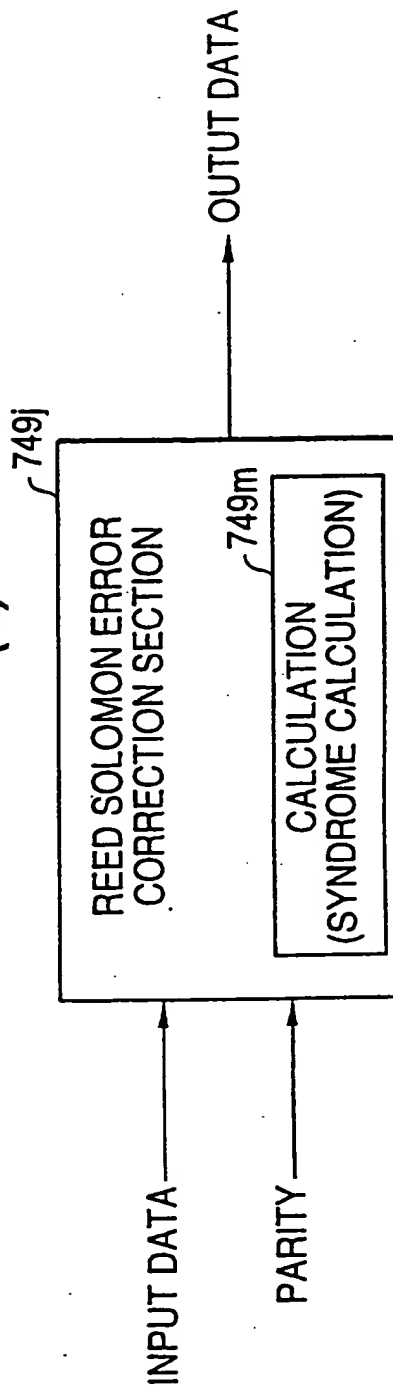


FIG. 165(b)



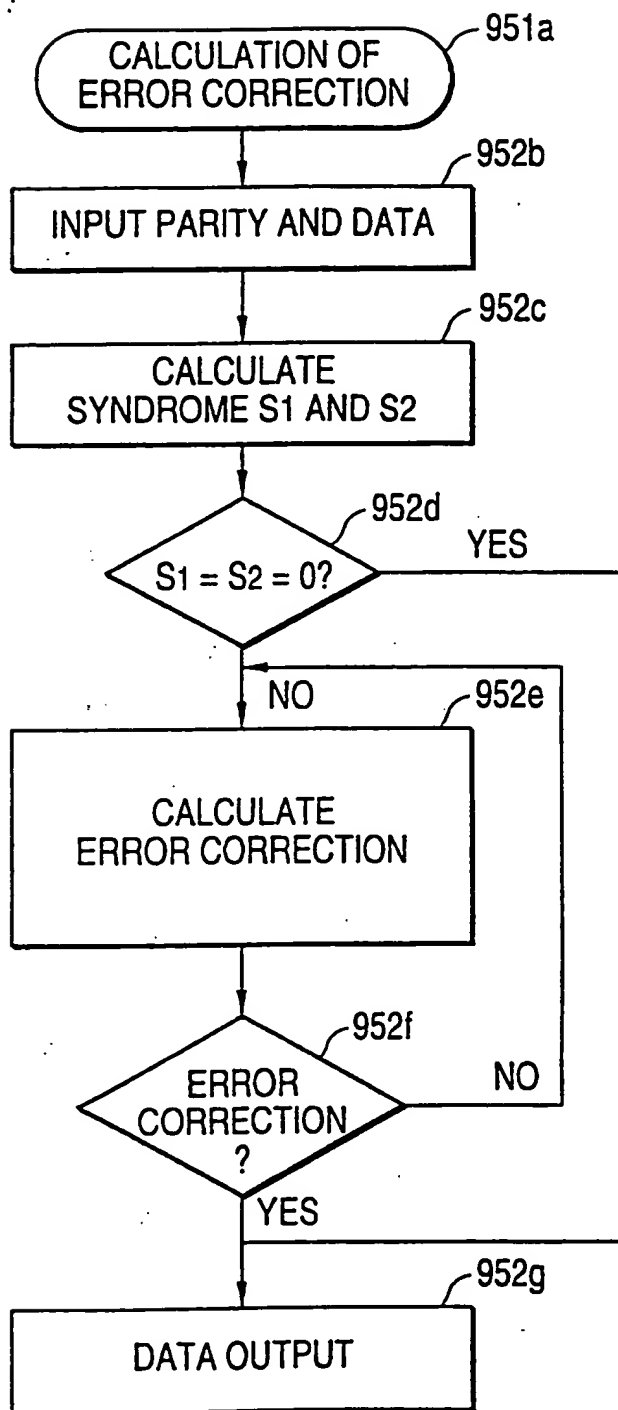
**FIG. 166**



FIG. 167

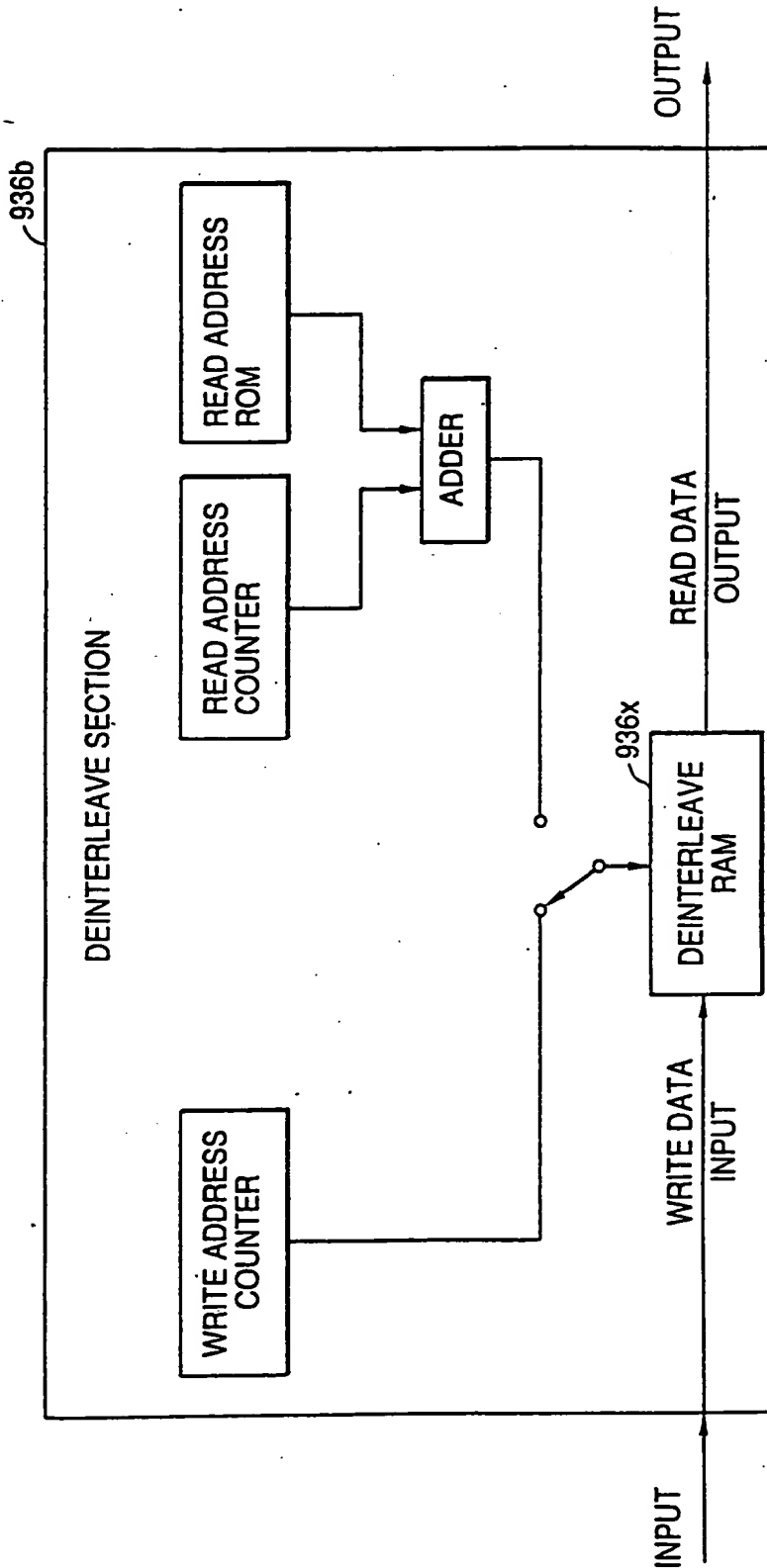




FIG. 168(a)

INTERLEAVE TABLE

1	2	3	4	5	6	7
DATA						C2 PARITY
1	A1	A2	A3	A4	A5	A6
2	B1	B2	B3	B4		
3	C1					
4	D1					
5	E1					
6	F1					
C1 PARITY	PARITY	PARITY	PARITY	PARITY	PARITY	PARITY

FIG. 168(b)

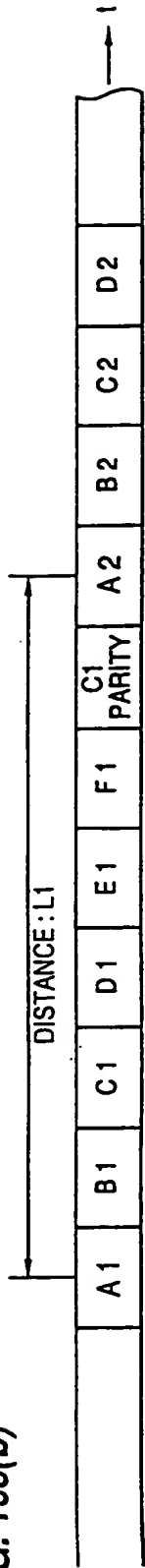




FIG. 169

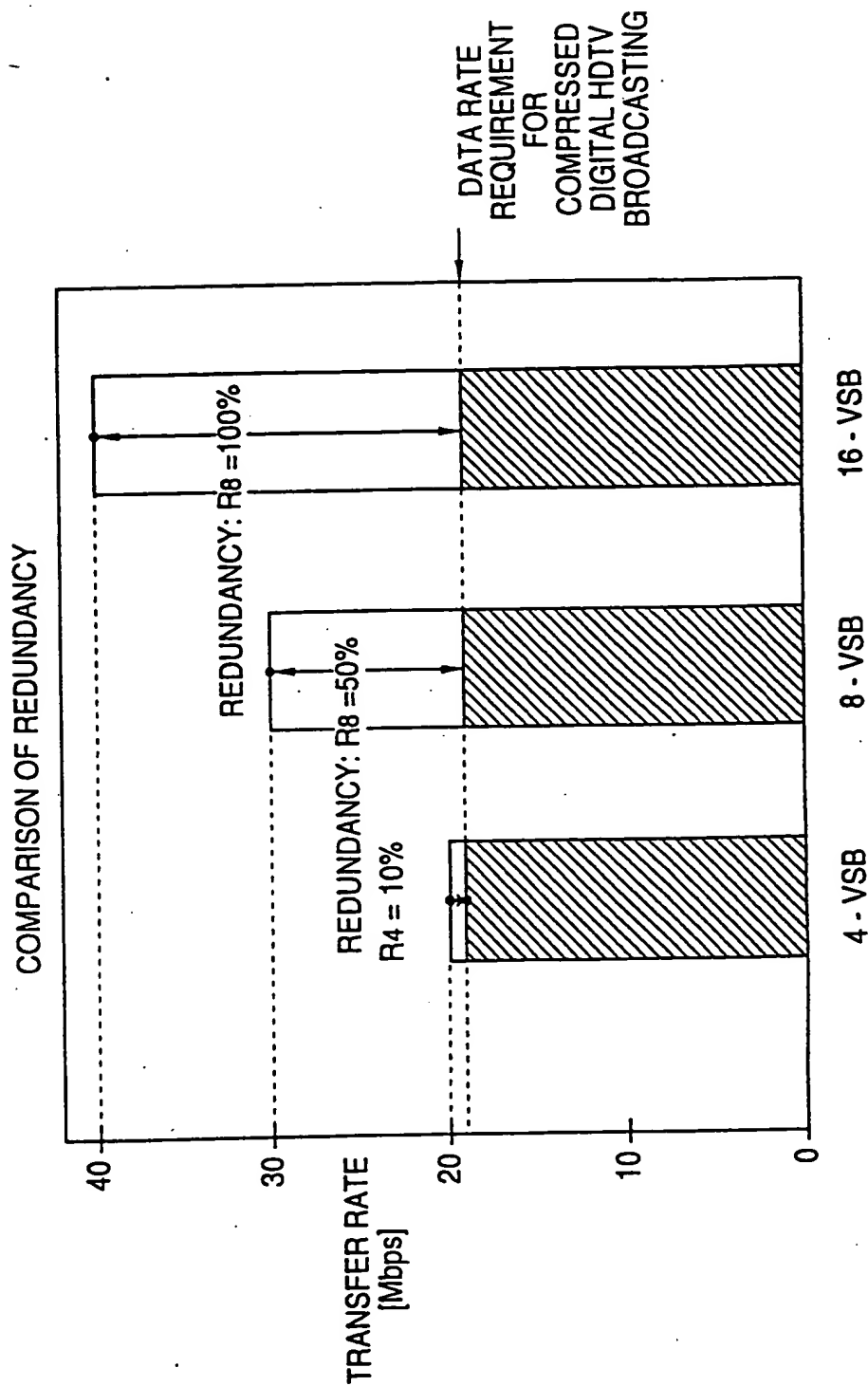




FIG. 170

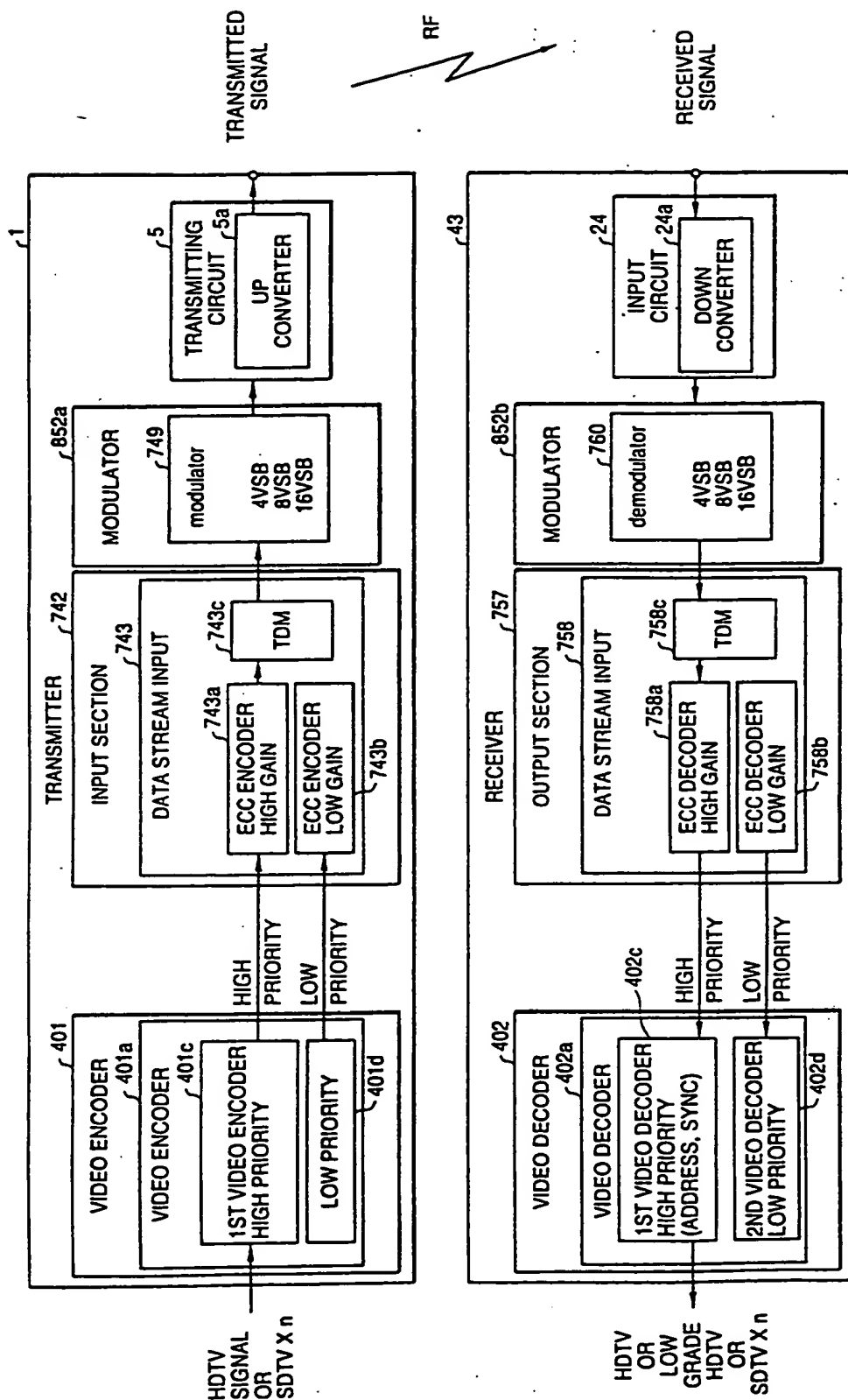




FIG. 171

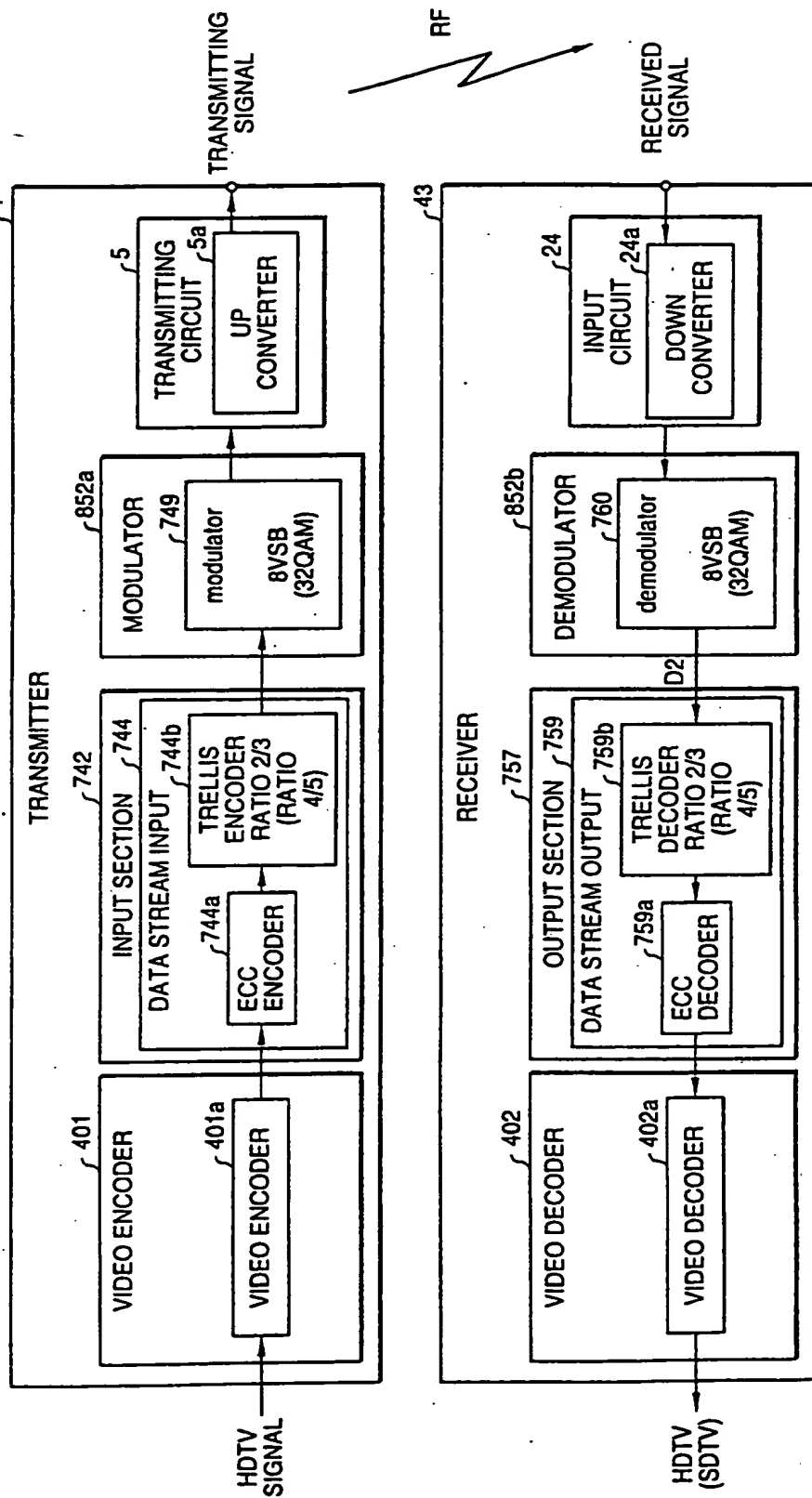


FIG. 172

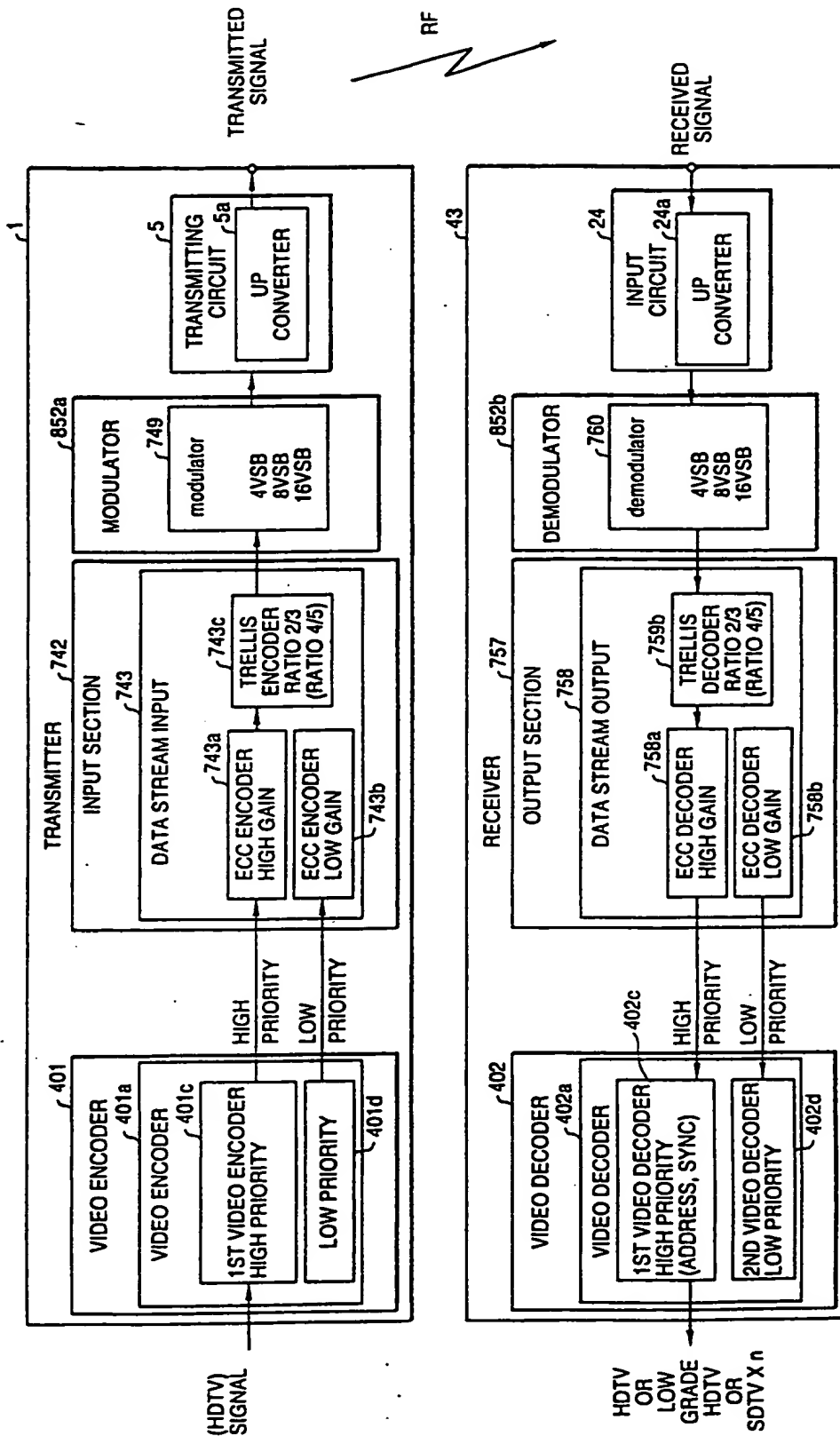


FIG. 173

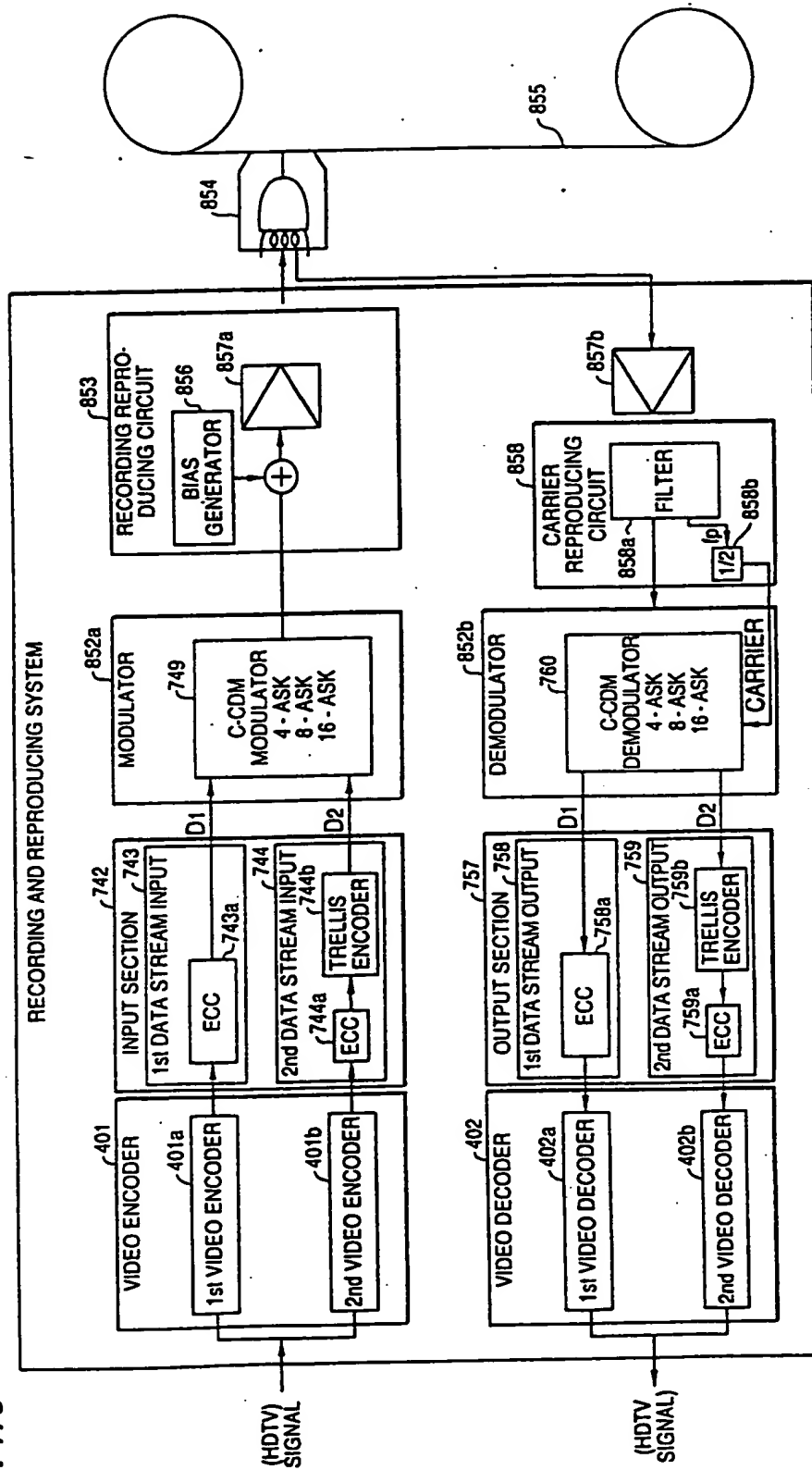


FIG. 174

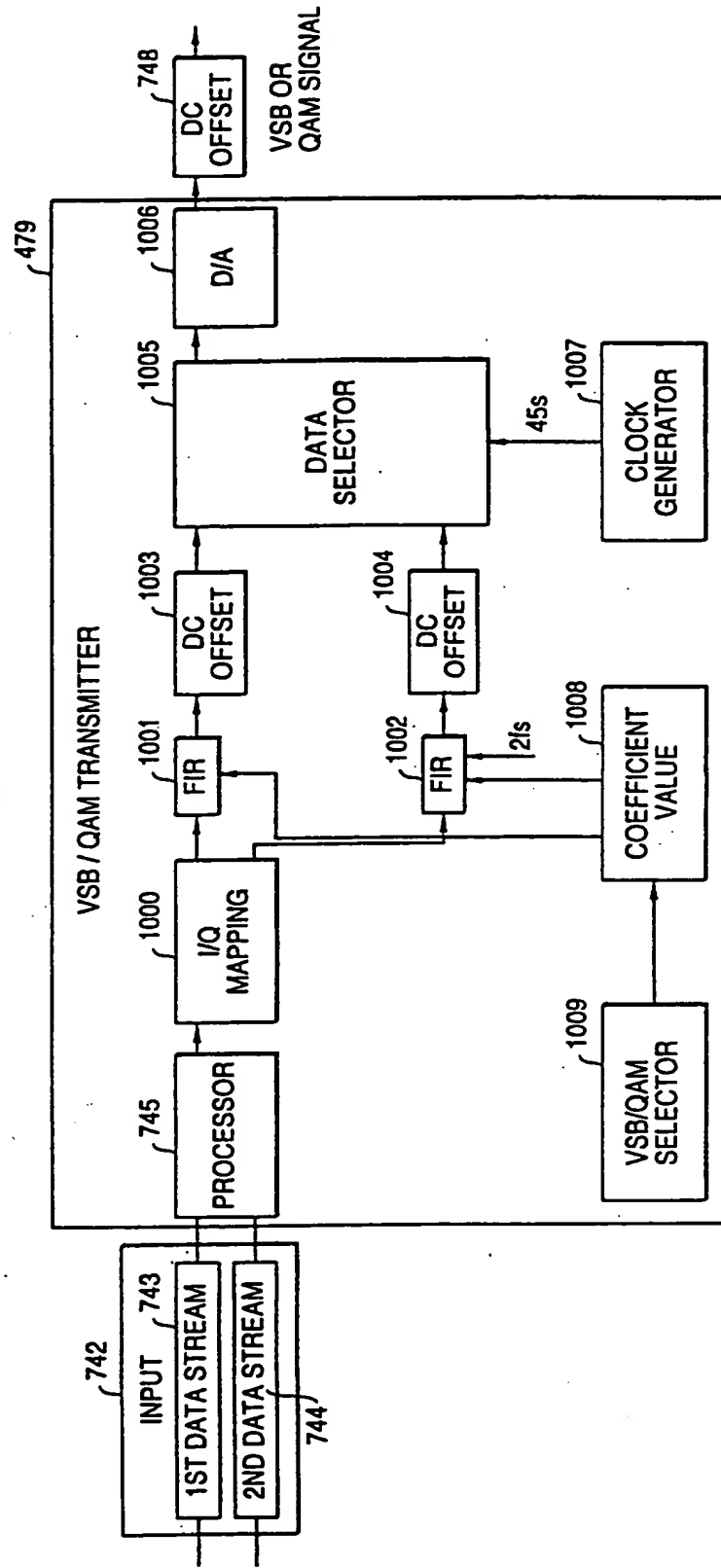




FIG. 175

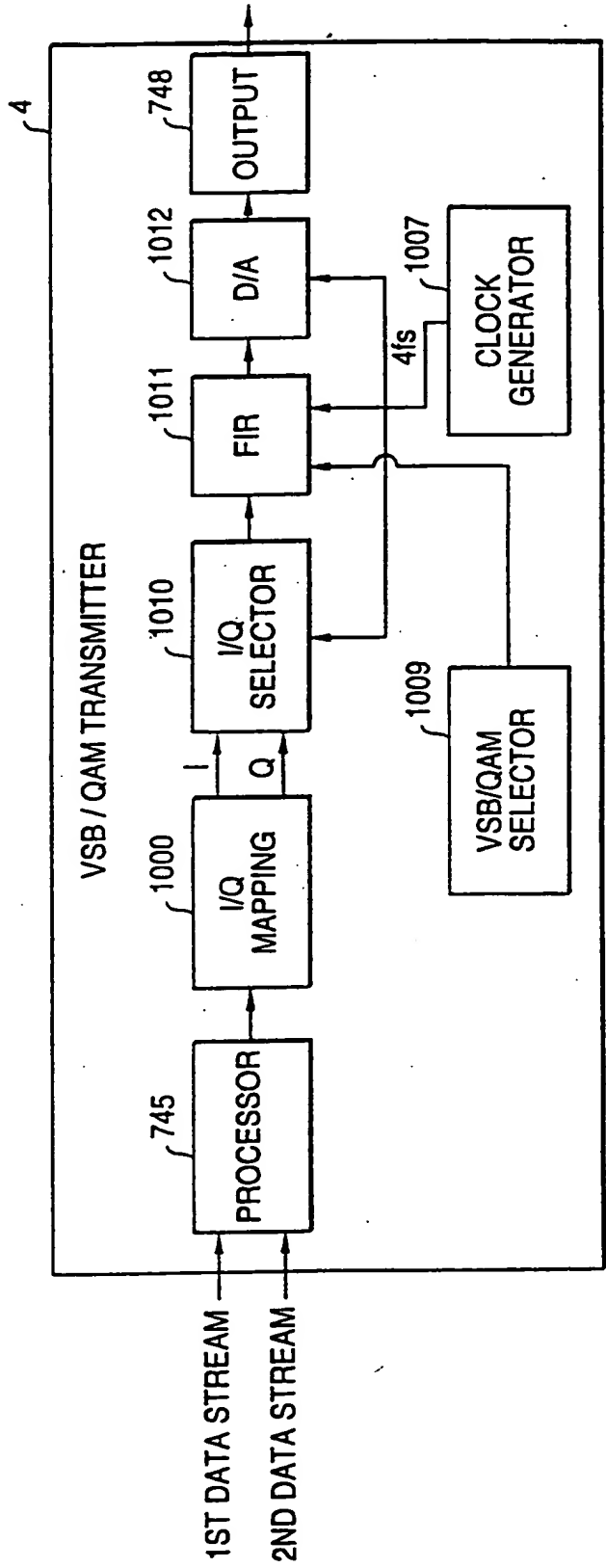




FIG. 176

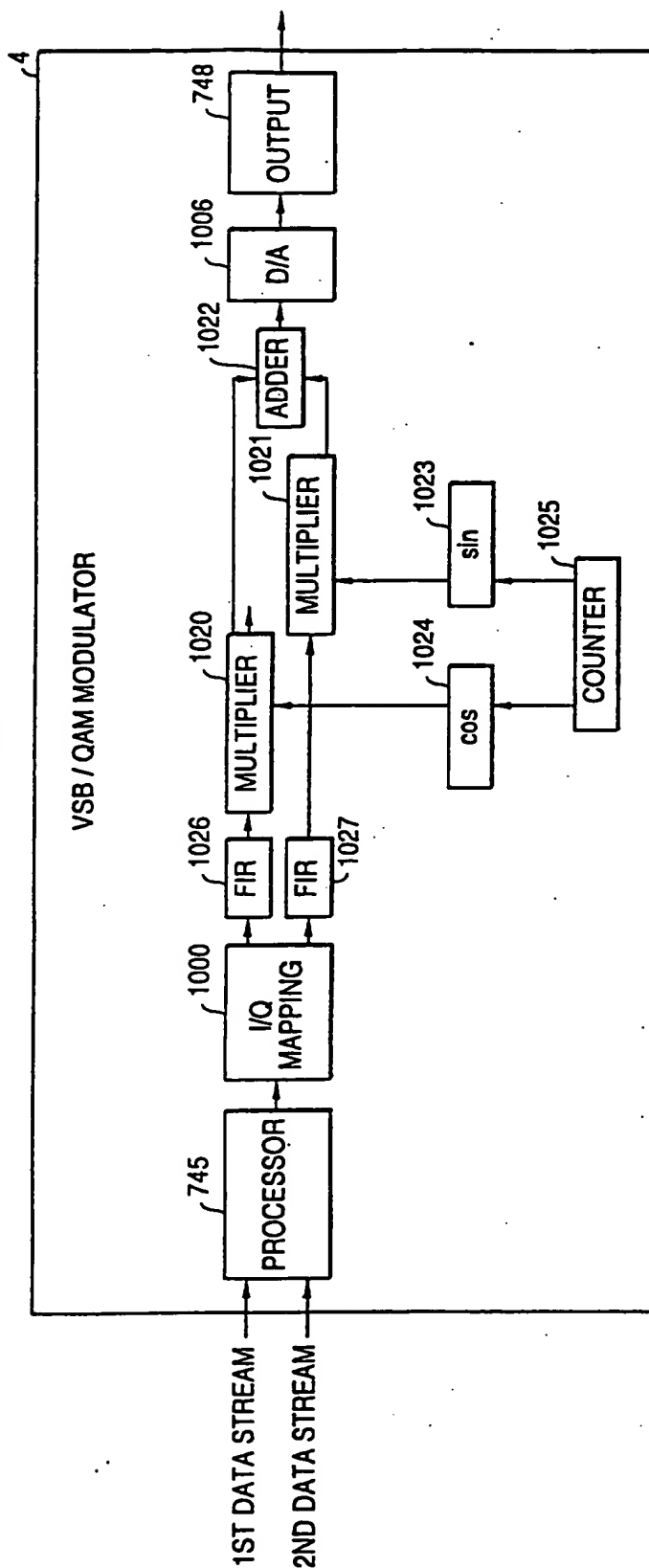




FIG. 177

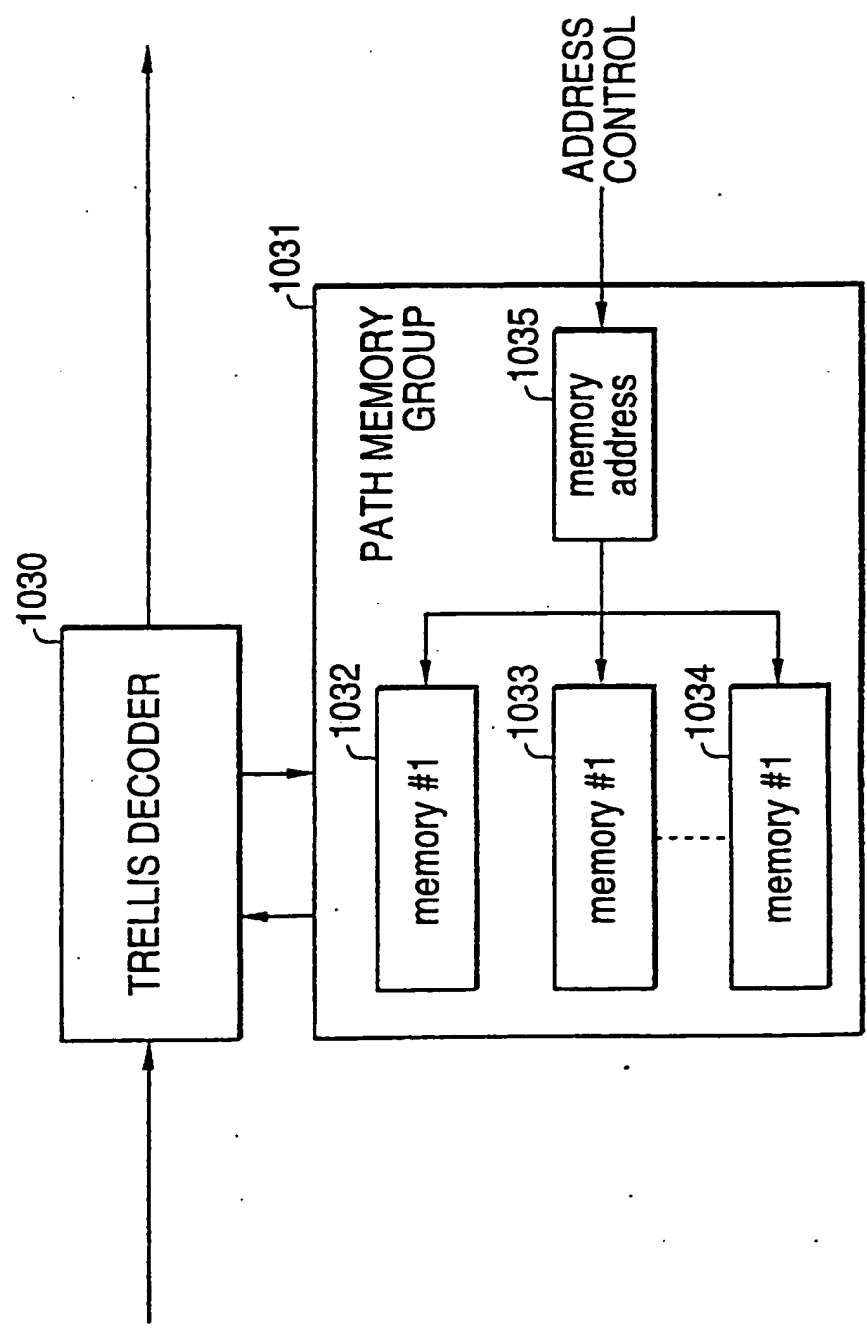




FIG. 178

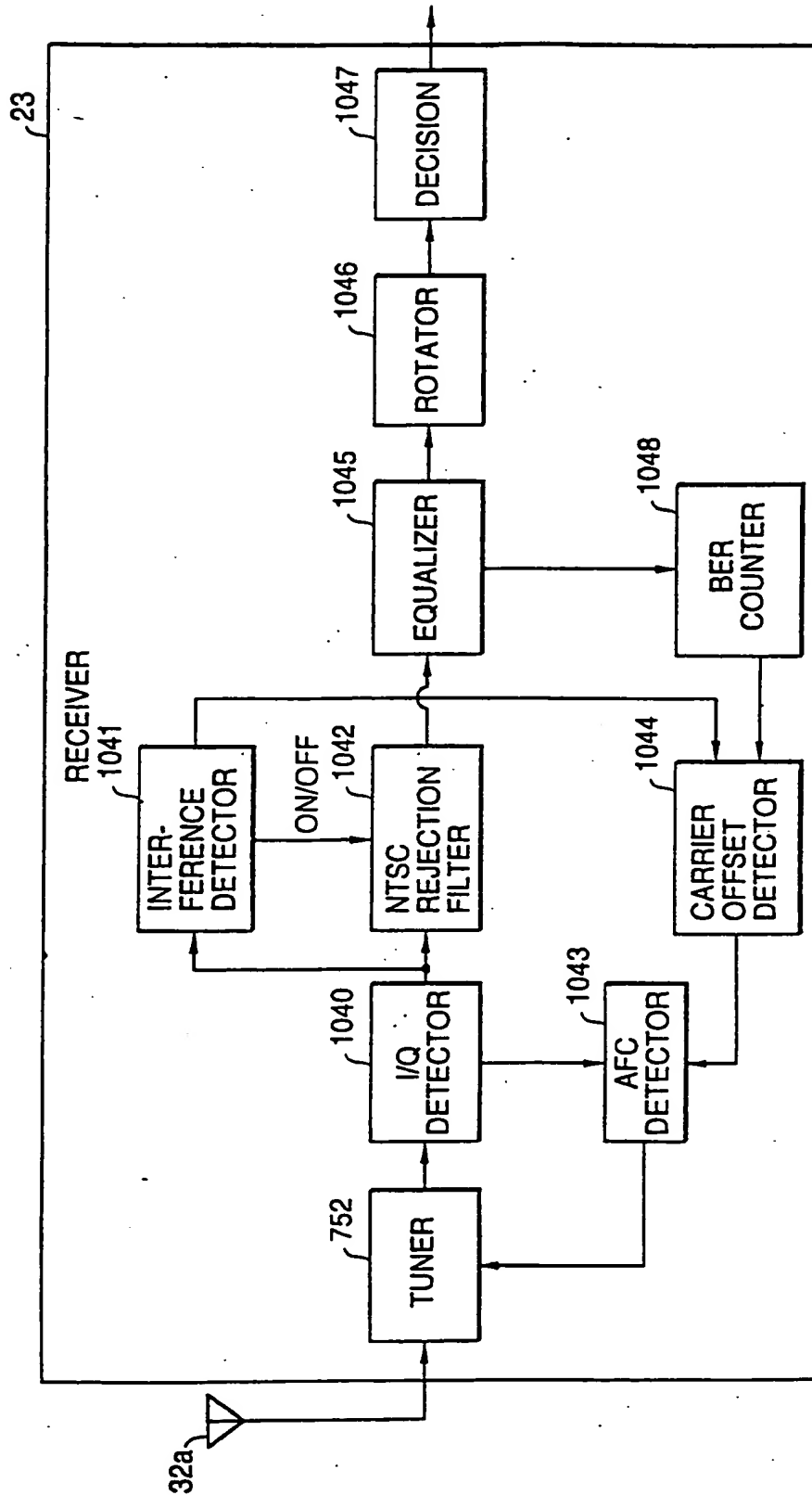




FIG. 179

